

Vermont Blueprint for Health

2011 Annual Report

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Department of Vermont Health Access

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1. EXECUTIVE SUMMARY

2011 was a year of significant expansion for the Blueprint for Health – a state-led initiative that is transforming health care delivery in Vermont with a focus on seamless, effective and preventive health services.

This year, the number of Advanced Primary Care Practices (APCPs) – a model that includes Patient-Centered Medical Homes (PCMHs) and Community Health Teams (CHTs) supported by multi-insurer payment reforms – more than tripled from 24 practices at the beginning of 2011, to 78 by December 31, 2011. These practices serve more than 350,000 Vermonters across the state – up from 101,000 a year earlier.

At the end of 2011, at least two practices in each Health Service Area (HSA) had transitioned to the Blueprint model as mandated by Vermont Act 128 of 2010. Expansion is continuing, working towards involving all willing providers statewide by October 2013 in compliance with Act 128 .

Efforts over the past year encompassed all aspects of the Blueprint model, including:

- Preparing for and facilitating the transition of traditional primary care practices to become Patient-Centered Medical Homes in accordance with National Committee for Quality Assurance standards.
- Planning for and developing core CHTs in each HSA.
- Expanding the number of CHT “extenders” across the state. These are individuals or teams that work with the core CHTs to support targeted sub-populations with more intensive services.
- Increasing self management programs and decision-making support for patients, including new chronic pain Healthier Living Workshops and enhanced tobacco cessation support and counseling.
- Implementing payment reforms that involve all major insurers.
- Connecting practices’ information systems with the Blueprint’s centralized data systems, and expanding the Blueprint’s health information architecture to each HSA.
- Enhancing and growing the Blueprint’s evaluation program, allowing for highly structured reporting that can guide the activities of a Learning Health System – a system that uses data and experience to fuel continuous improvement.

The impacts of the Blueprint on use of health care resources are available and highlighted in this year’s report. Overall, the trends observed in Vermont are encouraging and suggest a reduction in the growth rate for important measures of healthcare expenditures and utilization.

Qualitative evaluations – based on interviews conducted in the first two Health Service Areas pilots in the spring of 2011 – emphasize the tremendous benefit of the Community Health Teams to communities, primary care practices and patients. Benefits mentioned by those interviewed included:

- Having extra health care professionals working in the practice.

- Immediate, in-house assistance for mental health needs.
- Bringing together practices, hospitals and community organizations that used to work in silos.
- Improvements in communication among providers.
- Improvements in care coordination and facilitating transitions of care.
- Patients noticing a shift from episodic to whole person, patient-centered care.
- Panel management and referral tracking tools improving practices' ability to follow patients.
- Patients reporting positive health care experiences and increased ability to manage their health.

In interviews this year, providers, practice staff and Blueprint staff members also shared their thoughts about why they find the Blueprint work rewarding:

"It's so great when patients come back and say, 'Look at this, look how well I've done!' It's inspiring to see the changes people make." –Shauna Barrett, Community Health Team, St. Johnsbury

"I feel really proud of being a Blueprint practice. It just makes you feel good. We have a new physician who says he has never been in a practice where everybody knows about the process and helps, from the front desk person to the chronic care coordinator to the physicians and nurses. He doesn't have to spend half of his day trying to figure out how to take care of that tough patient, because there is a Community Health Team. So you can take care of the whole patient." – Dr. Joyce Dobbertin, Blueprint physician, St. Johnsbury area.

"My job gives me a lot of satisfaction, because I feel like I am delivering the kind of health care we all want to deliver. You can identify a need, make a referral, see real change, and that is what most people in health care are in it for – because they care about people." –Jen Daley, Community Health Team, Burlington

2. PROGRAM STATUS

2.1 Introduction. The Blueprint for Health is a state-led initiative that transforms the way that health care and overall health services are delivered in Vermont. Acting as an "agent of change", the Blueprint is leading a transition from an environment where healthcare tends to be reactive, fragmented, and poorly coordinated, to a new environment where all Vermonters have access to a continuum of seamless, effective, and preventive health services. The focus of the Blueprint has been to implement a model that organizes community systems of health despite the existence of independent providers, practices, organizations, and multiple insurers. Stated differently, the Blueprint is working to establish "system-ness" in a non-system. The model is based on the premise that this type of reform requires a comprehensive approach that addresses some of the most fundamental components and drivers of healthcare. Central to this is changing the way that healthcare is paid for, by moving away from the long-standing practice of paying a fee for a service, a form of payment that has proven to be an

incentive for a high volume of services over high quality. The Blueprint payment reforms involve all insurers, and are highly targeted in their design with incentives for services that meet the health related needs of individuals and communities.

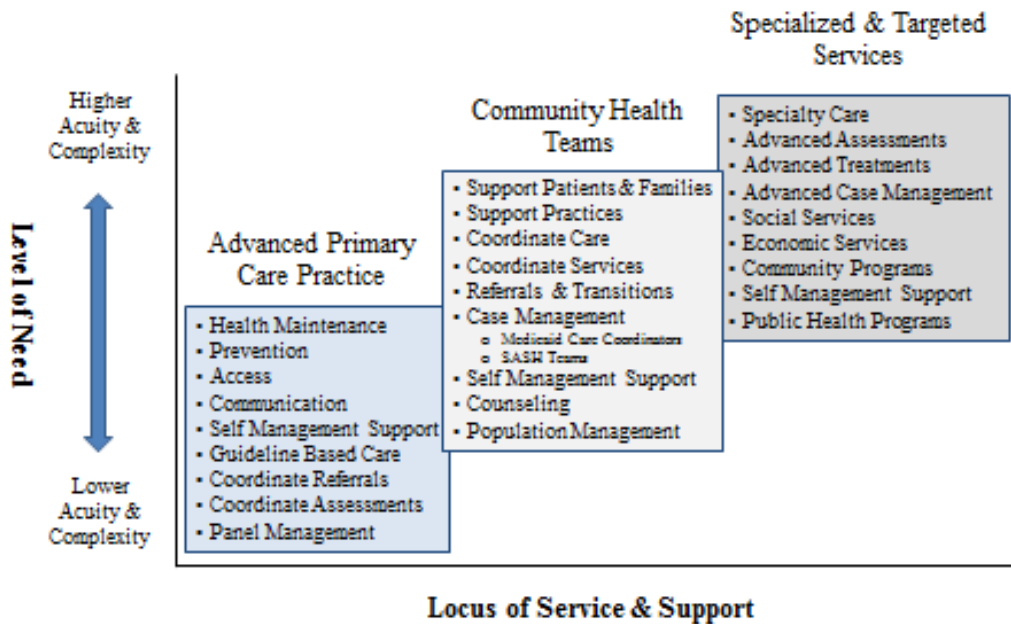
Payment reforms alone are not enough. They need to be part of a more comprehensive approach that includes the infrastructure, people, and resources that are necessary to support substantial change and effective health services. Patients need reliable and ready access to high quality primary care, such as that envisioned in the concept of a Patient Centered Medical Home (PCMH). Many patients and families need additional services (both medical and non-medical) that go well beyond those that are readily available in the traditional primary care setting. This type of multi-disciplinary support has not typically been closely integrated with primary care, or available to the general population to promote health and wellness. A health information technology infrastructure is also important; it should have an architecture that supports the best services for individuals and populations, and must be capable of accomplishing this in a health care environment that consists of independent practices, service providers, and organizations. Another essential component is a demonstrable infrastructure and a systematic approach to supporting complex change. This is particularly important when trying to guide successful change in a complex 'non-system', with so many independent and disparate interests and a deeply entrenched culture of change avoidance. The quality improvement infrastructure should include highly skilled 'change agents' and the data systems to guide an objective yet engaging process with primary care practices and other providers in the community. The Blueprint is leading a statewide transformation of health services towards a systematic approach. The model is generalizable to different community settings (rural, suburban, urban), scalable based on the population served, and financially sustainable with offsets for the new investments that are necessary for the delivery of high quality health services. The Blueprint approach brings resources and opportunities to communities and natural geographic service areas, and not via a top-down administrative approach. Each community, or natural aggregation of providers within a community, plan their operations and strategies based on overall design principles and program objectives. This mechanism further supports the inevitably complex change process, and a real evolution towards community systems of health. Key components of the Blueprint model are discussed below.

2.2 Basis for a Continuum of Health Services & Community Systems of Health.

As seen in **Figure 1**, there is by definition a spectrum of acuity and complexity that needs to be addressed in a variety of settings. While primary care has been the focus of much of the Blueprint interventions, the need to collaborate and coordinate efforts with specialized services (medical and otherwise) ultimately defines the broader impact of the program. The statewide expansion of Advanced Primary Care Practices (APCPs), supported by core CHTs and CHT extenders as described below, has established a novel foundation for high quality primary care with embedded multi-disciplinary support services, better coordination and transitions of care, and more seamless linkage amongst the multitude of partners of many disciplines.

Effective teams (defined as inclusive and transformative) are the basis for all of the quality improvements in the Blueprint, supported by payment reforms that provide patients and practices with unhindered access to CHTs, CHT extenders and self management opportunities.

Figure 1. Blueprint Continuum of Health Services



“Phase 1” payment reforms are designed to embed a sustainable spectrum of healthcare and support services as illustrated in **Figure 1**, which can appropriately respond to individual patient needs. For the patients who only need age and gender-specific health maintenance or other routine care, the “locus of support” will likely be the APCP with some support as necessary from CHT staff. Patients with complex circumstances will receive more intensive specialty care and support services at a different “locus of support”, which will vary depending on the individual circumstances. Specialized providers (working in conjunction with CHT extenders and the APCP) will serve this role. In many instances, the “locus of support” will shift along with changes in health status; therefore the system must be flexible in order to accommodate individual needs. The spectrum of efforts at the Advanced Primary Care Practice, Community Health Teams (core and extended) and in the realm of self management are described below.

2.2a Expanding statewide base of Advanced Primary Care Practices (APCPs). APCPs are primary care practices that deliver care consistent with the National Committee for Quality Assurance (NCQA) standards for a Patient Centered Medical Home (the PPC-PCMH standards). In the Blueprint model, practices prepare to be evaluated against these standards, which involves a substantial amount of work and often changes in the way a practice operates.

The NCQA PPC-PCMH standards are designed to assure high quality primary care that provides improved access for patients, improved communication and follow-up, more consistent care based on national guidelines for prevention and control of chronic diseases, improved coordination of care and linkages

with other services (medical and non-medical), support patient-level self management, and enhanced use of health information technology and decision support systems (**Table 1**).

The Blueprint helps practices meet the NCQA PPC-PCMH standards by providing the infrastructure each practice needs – from CHTs to the DocSite centralized registry to population management tools. Each standard involves a focus on the patient as the center of the activity.

Table 1. NCQA standards for a Patient Centered Medical Home

NCQA PCMH 2011 six standards	Six must-pass elements
Enhance Access and Continuity	Access During Office Hours
Identify & Manage Patient Populations	Use Data for Population Management
Plan & Manage Care	Care Management
Provide Self-Care & Community Support	Support Self Care Process
Track & Coordinate Care	Track Referrals & Follow-up
Measure & Improve Performance	Implement Continuous Quality Improvement

Delivering the high-quality, patient-centered care required by the standards takes time, and often more staffing dedicated to thorough assessments and coordination of care. In the Blueprint model, APCPs are also supported for these efforts by an enhanced payment proportional to their NCQA PPC-PCMH score (one component of “Phase 1” payment reform). All major public and commercial insurers in Vermont are participating in “Phase 1”, as mandated by Vermont statute.

2.2b Statewide foundation of multi-disciplinary locally based core Community Health Teams.

Many patients and families need access to a wide range of support services even though they receive their health care in an Advanced Primary Care Practice. In particular, it is often difficult for people to make lasting behavioral changes that lead to healthier lifestyles, or to remain engaged with treatment plans that can improve control of their chronic health conditions, or to navigate the complex world of fragmented health related services that currently exist.

A good example of this is the story of J.M., a 49-year-old Burlington man: *J.M. worked in construction jobs most of his life and eventually began having problems with his feet, back and hands. After his wife died of a sudden heart attack in 2004, he began drinking more heavily and eating poorly, and he stopped working. At 5 feet, 3 inches, he weighed 218 pounds, and did not have health insurance.*

He came into contact with the Blueprint through Dr. Gene Moore, who was his aunt’s doctor. He began seeing Dr. Moore and was referred to the Community Health Team, who helped him sign up for health

insurance through the Vermont Health Access Program. Jen Daley, a social worker with the CHT, helped him improve his health, using a non-judgmental approach.

“She didn’t pressure me,” J.M. said. “She was there for me, but she didn’t nag at me like a parent. She was just there to help, but basically I had to do it myself. Someone could say Do it, do it, do it, but it took me spending almost four days in bed just drinking vodka to decide I had to do something.”

Working with Daley and Erica Hoyt, the CHT’s health educator, he eventually went to counseling, stopped drinking, improved his diet and began exercising at the YMCA. While he still has health issues, he has lost 90 pounds and his blood pressure returned to normal. “The key to J.M.’s story is that he stopped drinking, lost weight, eats well, gets exercise, and is a happy guy,” Dr. Moore said.

For many patients like J.M., the chance to optimize their overall health and wellness depends on assistance from personnel such as nurse care coordinators, medical social workers, trained counselors, dietitians, and health coaches. These services have not historically been well integrated into the primary care setting, and they have not been readily available to the general population. The Blueprint model addresses this by establishing and funding the CHTs -- multi-disciplinary, locally-based teams that work closely with, and often in, the ACP setting. The CHT effectively expands the capacity of the practice providing patients with direct access to an enhanced range of services, and with closer and more individualized follow up. CHT members assist patients and families with care coordination, counseling, enhanced self management, education, and transitions of care, including coordinated linkages with targeted specialty services (e.g. specialty care, mental health & substance use treatment, social services, and economic services).

The CHTs work very closely with patients, often helping them with things like shopping to buy healthy foods or getting them into exercise programs.

“When I see members of the Community Health Team, they always say, Is there anything we can do for you, do you need any help? And they don’t forget your name. They make you feel they are friends. They care,” said F.L., 67, a nurse and Blueprint patient from northeastern Vermont.

The “core” CHT members (those staff whose salaries are covered by “Phase 1” payment reform) that work directly with ACPs meet regularly with other service providers in their community. This has resulted in a continuum of coordinated health services and a much larger “functional” CHT. The size of the core CHT in each community is scaled based on the population being served in the Advanced Primary Care Practices, with a half time position added for every 2000 patients. Barriers to care are minimized since there is no charge (no co-pays or prior authorizations, as well) to patients. CHT services are available to all patients in the ACPs they support, regardless of whether they have health insurance of any kind or are uninsured. The costs for CHTs are shared by all major insurers in Vermont (another component of “Phase 1” payment reform).

Providers also testify to the numerous benefits of having CHTs: *“I used to feel that I spent my day putting out fires, not really giving patients the time they needed. I would tell them to try to do better with diet and exercise, but I didn’t have time to do more than say that. The Community Health Team can spend the time. They find out things about patients that I didn’t know and share that with me. Before Blueprint, I was sometimes afraid to ask questions because it would be opening a can of worms I couldn’t*

cope with. "Are you depressed?" I would have no place to go with it. They might say, "Yes, that's why I drink so much." I used to feel that I was held hostage. Now that I know there's a team behind me, I ask the question," said Dr. Jennifer Gilwee, Burlington Blueprint.

2.2c Statewide foundation of Community Health Team extenders. These are individuals or teams that work closely with the core CHT to support more targeted subpopulations. They work directly in communities providing more intensive services to individuals that need them while the core CHT members support the general population. The APCPs, core CHT members, and CHT extenders establish a flexible continuum of preventive and wellness oriented services in a community that can respond to changing needs of individuals and families. Examples of CHT extenders include:

- **Vermont Chronic Care Initiative (VCCI)** - These are Medicaid Care Coordinators who act as case managers for high-risk patients with particular chronic conditions. The Medicaid Care Coordinator works intensively with these patients until specific treatment goals are met. VCCI staff and the CHT staff are in frequent communication with joint care conferences as the norm. Once the patient no longer requires these intensive services, or no longer qualifies for Medicaid, he or she will continue to be followed in the APCP and supported by the CHT as necessary, moving back into the VCCI if indicated. Vermont Medicaid is expanding the number of these skilled case managers as the Blueprint expands statewide.
- **Support and Services at Home Program (SASH)** – The SASH program provides support and services to Medicare beneficiaries, so that individuals can live and age safely in their own homes. Dedicated SASH staff, including a full time SASH Coordinator and a 0.25 time Wellness Nurse for every 100 participants in the program, is embedded in housing organizations and provides services to elderly and disabled Medicare beneficiaries living at subsidized housing sites and elsewhere in the community. The SASH Teams focus on three areas of intervention that have proven most effective in reducing unnecessary Medicare expenditures. These include:
 - a. Support for transitions after a hospital or rehabilitation facility stay;
 - b. Self management education and coaching particularly relating to chronic health conditions
 - c. Care Coordination.

Medicare participation in the Blueprint is supporting SASH Teams statewide in conjunction with Blueprint APCPs and core CHTs. As of January 2012, there are twelve SASH Teams providing services to Medicare beneficiaries in communities throughout the state.

2.2d Expansion of a Continuum of Self management & Decision Support. Enhanced self management and informed decision making is firmly embedded in multiple forms into the Blueprint model. Due to this emphasis on self management and informed decision-making, many patients are reporting successful outcomes:

"A 76-year-old woman came to me morbidly obese, over 400 pounds. She lived in a senior home, and we started her walking the hall three times a day. Six months later I went with her for her first visit to the YMCA. The short story is that she has lost 100 pounds and goes to the Y three times a week. She is a

changed woman, and she is very proud of herself,” said Pam Farnham, Community Health Team, Burlington.

“G. was a newly diagnosed diabetic, 47, a seventh generation Vermonter, and his physician came to me and said, ‘I’ve given him oral diabetes medication, but he won’t take it. I don’t know what to do with him. Good luck.’ So there he was, arms crossed, very defensive. I told him that patients were the real experts and asked him to tell me what he knew about diabetes. ‘I want to manage it without medication,’ he said. ‘I want to keep eating ice cream.’ I said, ‘What are you going to do?’ He said he didn’t know. ‘May I offer some suggestions that have worked for other people? A diabetic educator can go over what you can eat. You can make small changes, and you can still have ice cream.’ He went twice to the diabetic educator, dropped 35 pounds, and has been able to manage his diabetes through diet,” said Mitya Schoppe, Community Health Team, St. Johnsbury area.

While patients receive support from CHTs, their providers and other health care professionals, the real change is coming from their ability to manage their own conditions on an on-going basis:

“We work together to wrap support around patients, but it has to be what they want to happen. If they are not ready for change, we just introduce ourselves and let them know we’re here. Often they come back,” said Pam Smart, Community Health Team, St. Johnsbury

The Blueprint supports self management and informed decision-making in the following ways:

NCQA PPC-PCMH scoring of Advanced Primary Care Practices includes elements related to patient centered self management goals. Enhanced payments based on these scores function as direct incentives to focus on setting and tracking patient centered/patient generated goals. Patient priorities, rather than those identified by the provider, become the motivating force, and are linked clearly to rewards for the practice.

Blueprint Central Registry (DocSite) documentation and tracking of self management goals and action plans (for providers and CHT members) allows for clear longitudinal assessment in a structured and therefore reportable format.

Community Health Teams, working closely with ACPs, provide resources and supports (e.g. counseling & education) that are essential for many patients to achieve personal goals, live healthier lifestyles, and improve their health status.

Practice-based trained health coaches are present in primary care offices throughout the state, the result of a series of collaboratives in 2009 and 2010. Participants were trained in Clinical Microsystems, motivational interviewing and other curricula. In addition, there are CHT staff members who work as health educators and health coaches in multiple practices.

Healthier Living Workshops (HLWs) are the Vermont version of the Stanford Chronic Disease Self Management Program, an evidence based series of workshops that provide patients and families with the tools to better cope with their symptoms and life situations. Vermonters have enjoyed statewide access to HLWs since 2004 with high satisfaction levels. Vermont has a broad and deep statewide capacity for the implementation of the HLW. The activity in 2011 is summarized in **Table 2**. New in

2011 was the introduction of the Healthier Living with Chronic Pain Workshops. These have been very well-received by patients and leaders alike with anticipated increases in enrollment in 2012.

Table 2. 2011 Healthier Living Workshops and Infrastructure

Characteristics	Numbers
HLW - General	43
HLW - Diabetes	9
HLW - Chronic Pain	8
HLW Leaders - General	99
HLW Leaders - Diabetes	27
HLW Leaders – Chronic Pain	2
HLW Master Trainers	13
HLW Top Level Trainers	1
HLW Regional Coordinators	16

Healthier Living Workshop participants learn to better manage and cope with their symptoms. Workshops empower individuals through education, peer support and skill-building exercises, with an emphasis on goal-setting and problem-solving.

Patients testify to the positive benefits of the program: *“Since taking part in the Blueprint program, I lost 66 pounds, my A1C is down, and I don’t take pain medication any more. Honestly, if it weren’t for the program and the Healthier Living and Chronic Pain Management classes, I would not be where I am today. They are a Godsend,”* said F.L., 67, a nurse and Blueprint patient from northeastern Vermont.

Added another Blueprint patient: *“They had a task every week in the Healthier Living Workshops where you set a realistic goal that you want to accomplish. And for me, it’s like, I can do this. It made me have a purpose. It’s hard to get up every morning now that I’m not working, and now I had something to accomplish and a way to do it.”*

Healthier Living Workshops are facilitated by two leaders who have been trained in a 4-day program by Stanford-certified master trainers. (Master trainers are in turn trained by a “T-trainer, highly skilled and trained themselves.) The HLW leaders are generally not professionals, but are instead peer leaders who have at least one chronic disease themselves. Groups meet for an hour and a half weekly for six weeks, a substantial time commitment on the part of the participants.

The workshops were developed and determined to be effective by studies (of participants nationwide) at Stanford University, and are one of the many evidence-based tools implemented by the Blueprint.

Tobacco cessation activities and support. In 2011, Fletcher Allen Health Care and the Vermont Department of Health worked together to transition the Quit In Person tobacco cessation program to the Blueprint for Health, as well as planning for the integration of individual tobacco cessation counseling to occur through the Community Health Teams. In 2012, training will be provided for CHT members to help enhance their knowledge and skills to work with tobacco users. In addition, this

partnership will allow CHT patients working with current cessation counselors to get access to free Nicotine Replace Therapy (NRT).

The Quit In Person program is administered through the 14 Vermont Hospitals and beginning in January 2012 will be offered through Little Rivers Health Care in the Upper Valley Health Service Area. In the last quarter of 2011 there were 241 people who registered for the Quit In Person program and 33 groups offered (the average session attendance was 5 participants).

The Vermont Quit Network is composed of four primary parts; Your Quit, Your Way, Quit On-line, Quit By Phone and Quit In Person, all briefly described below:

- **Your Quit, Your Way** provides smokers with tools and self directed support to assist those that wish to try and quit on their own.
- **Quit On-line** offers advice, tips, and an interactive forum where smokers can talk with other smokers who know what they are going through.
- **Quit By Phone** links individuals with a quit coach at a time that works for them. They provide 5 personalized calls (20-30 minutes each) to help a smoker get ready and provide tips, advice and support to stay tobacco-free.
- **Quit In Person** offers weekly group cessation classes in communities around the state which assist participants in preparing to stop using tobacco and support after they quit. Like other Blueprint self management programs, Quit in Person provides a forum for peer support.

Wellness Recovery Action Plan (WRAP). WRAP is a standardized group intervention for adults with mental illness using a set curriculum and implementation model. WRAP groups are led by two trained co-facilitators who are often “peers” or individuals who have experienced mental illness. The groups typically have 8-12 participants and this psycho-educational program is delivered over eight weekly 2-hour sessions. The material teaches participants the key concepts of recovery (hope, personal responsibility, education, self-advocacy, and support). It helps participants organize personal wellness tools which are activities and resources they can use to help maintain well being in the face of symptoms. In addition, each participant develops an advanced directive that guides the involvement of family members, supporters, and health professionals in the event that the individual is not able to act on his or her own behalf.

First introduced and supported by the Vermont Department of Mental Health in 1997, the WRAP curriculum has been used extensively in Vermont and other states with the support of the Federal Substance Abuse and Mental Health Services Administration (SAMHSA). Two rigorous studies have been conducted showing generally positive outcomes from participation in the WRAP program. Participant surveys report very high rates of satisfaction.

The Mount Ascutney area began offering WRAP in addition to Healthier Living Workshops last year in an effort to provide more supports for primary care patients experiencing depression, anxiety and other mental health conditions. Their initial efforts were supported by private foundation funding. This year they plan to double the number of sessions and the Blueprint will support these activities as part of the community based self management programs. If successful, this program may be spread throughout

the rest of the state.

Shared Decision Making (SDM) implementation is being planned for statewide adoption. The Blueprint is currently entering into an agreement with Health Dialog (with support from the Foundation for Informed Medical Decision Making) for training of practice facilitators, CHT members and interested primary care practice staff in the theory and methods of the SDM model with the goal of empowering patients to clarify questions and concerns, identify their personal preferences, resolve areas of conflict, and have more informed and productive discussions with providers.

The Blueprint will also have access to decision aids for 50,000 patients. Developed by Health Dialog in conjunction with the Foundation, their content is widely considered a “gold standard” for current unbiased evidence evaluation.

Training will commence by April 2012.

2.3 Payment Reforms

Introduction: Blueprint Payment reforms are strategically targeted to achieve desired outcomes.

Underlying the Blueprint are innovative financial reforms that align fiscal incentives with healthcare goals. All major commercial insurers, Medicare and Vermont Medicaid are fully participating in this first phase (“Phase 1”) of financial reform. Phase 1 reform supports transformation to high quality primary care and related health services, and is notable for its cutting edge nature and sustainability

Phase I payment reform is driving substantial engagement & transformation in communities across Vermont. A steadily growing number of primary care practices, in all Health Service Areas (HSAs), are preparing to be evaluated based on the NCQA PPC-PCMH standards. There were officially recognized APCPs in all HSAs as of July 2011. All willing primary care providers will be involved by October 2013 (Act 128 of 2010). The local planning process, supported by the Blueprint budget, is absolutely essential to the success of the program. To that end, multi-stakeholder planning groups have been established in each HSA. These groups are creating the local infrastructure and leading implementation of CHT operations across the state. They are also assisting with planning and sequencing of complex health information technology work in their HSA. This will result in practices and hospitals transmitting data from EMRs and other data sources to the Blueprint’s central registry (an eligibility requirement for payment reforms). These are clear examples of strategic payment streams leading to substantial change and coordination across communities.

Phase I payment reform includes a Per Patient Per Month payment (\$PPPM) based upon the primary care practice’s NCQA PPC-PCMH score. This is a ‘quality based payment’ that is in addition to traditional Fee for Service (volume based payment) and is the beginning of a move towards quality incentives. The \$PPPM promotes access, communication, guideline based care, well coordinated preventive health services, use of electronic tracking systems, population management, etc. Practices are scored against the NCQA standards by a University of Vermont based team, establishing an independent, objective, and consistent method to guide quality based payment. The UVM VCHIP evaluation is reviewed and finalized by NCQA. Each practice receives a “score”, and the higher the score, the higher the

proportional payment received from the insurers. This precedent provides a credible basis for structuring quality based payment.

Phase I payment reform also includes all insurers sharing the costs for core CHT members Total support is provided at the rate of \$70,000 (~1.0 FTE) / 4000 patients. This payment reform establishes a novel community based care support infrastructure that is available to APCPs and the general population. The CHT is a core resource for participating primary care practices which minimizes barriers to multi-disciplinary support for all patients and families (based on need, no co-pays, no prior authorizations, and available independent of socioeconomic status and insurer).

Phase I payment reforms are based on the following key design principles & methods:

The novel targeted payment streams are designed to achieve specific outcomes, with clear incentive structures that promote the stated Blueprint goals including quality, access, communication, and patient centered services. Payment streams to both the primary care practices and the Community Health Teams are oriented towards meeting the needs of patients (“patient-centric”) by supporting a system wide focus on healthcare quality rather than on volume. Providers are relieved of at least some of the pressure to see as many patients as possible in order to generate sufficient income. The new additional mechanism of payment allows for modification to refine incentives, outcomes, and health services model. The amplitude of payment is adjustable for specific levels of achievement, and can be altered as progress is measured and made.

The Blueprint has been steadily moving towards the standardization of reimbursement mechanisms. Insurer methodologies to attribute patients to recognized primary care practices for \$PPPM have evolved over the last few years, and are now largely consistent across insurers. This standardized methodology is in place and functioning across all participating insurers and for all primary care practices, independent and organization-owned alike. Attribution based payment assures that payment follows the patient, promoting patient choice and an incentive for providers to engage patients. Phase 1 payment streams are consistent in proportionality across insurers, do not depend on provider invoicing for services, and are a reliable source of revenue.

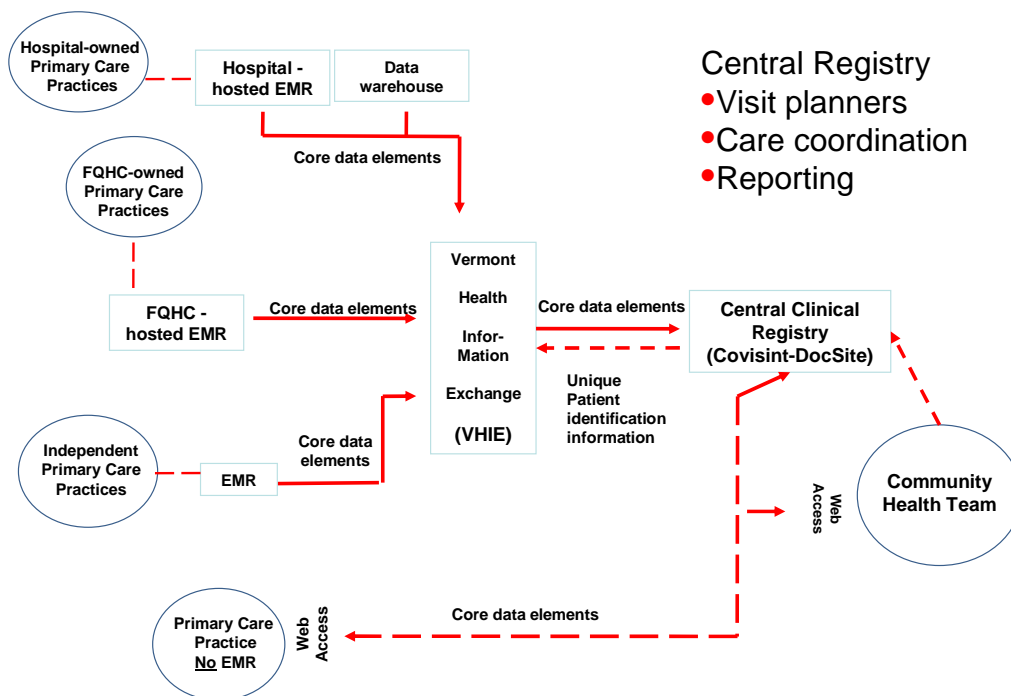
As Vermont moves toward broader payment reforms, the Blueprint Phase 1 methodology is serving as an underpinning. Its relative simplicity, while requiring a new approach by participating insurers, does not require formation of new organizations, administrative or otherwise. It establishes a basis for next phase of payment reforms that can influence well coordinated primary and specialty care across independent practices and organizations. It establishes tested, adjustable, and modifiable payment strategies to support overall financing reforms moving ahead.

2.4 Health Information Architecture

The Blueprint is establishing a health information architecture that supports preventive healthcare based on national guidelines, coordinated health services for individuals and populations, an integrated health record across a broad array of services and organizations, and, the flexible reporting that is necessary to support a Learning Health System and quality based payment. The Blueprint team has

worked closely with key partners that are integral to the development of Vermont’s statewide health information infrastructure to accomplish these goals. Key components of the architecture are discussed below and illustrated in **Figure 2**.

Figure 2. Blueprint Health Information Architecture



Blueprint data dictionary & measure set. The data dictionary and measure set includes data elements for clinical processes and health status. It is adopted directly from various national guidelines for preventive health maintenance and the treatment of chronic conditions. Input from participating Vermont providers has been an integral part of the development of the data dictionary and measure set. The development and review process is ongoing in order to update existing content as well as add new data elements and measure sets. Additional data elements and measures are being added related to care coordination and a broad range of health services (including non-medical services).

Blueprint centralized registry (Covisint DocSite) that is based on Blueprint dictionary & measure set. This web based system supports individualized patient care with guideline based decision support. It also supports management of populations with flexible reporting that moves easily between groups of patients selected by specific criteria and their individual patient records. Flexible comparative effectiveness reporting is readily available across providers, practices, organizations, and health services areas. The registry can also serve as an integrated health record across independent practices and organizations.

Overall health information architecture includes the Blueprint registry being fed data by EMR systems, hospital data systems, practice management systems, and direct data entry from an array of providers. Vermont Information Technology Leaders (VITL) is working with the Blueprint team, practices, hospitals, and EMR vendors to build interfaces with these data systems, and to transmit data through the Health Information Exchange infrastructure to the centralized registry (Covisint DocSite). The registry vendor (Covisint DocSite) is also working directly with practices to map their EMR systems to the data elements in the Blueprint data dictionary, and to provide training in the use of the registry. VITL and Covisint DocSite are working closely to establish the data feeds from the Health Information Exchange to the registry and from the registry to the Health Information Exchange. This bi-directional data transmission is essential so that providers who use the registry to track patient care can be sure that their patients receive master identifier numbers in Vermont's Health Information Exchange network.

Architecture supports the registry as a clinical tracking system for individual patient care. The Blueprint registry can be used as a clinical tracking system that will support 'planned visits'. The visit planners are individualized based on age, gender, and diagnoses. They provide guideline based recommendations for annual health maintenance, prevention, and chronic disease treatment. Results for recommended assessments are included along with the next 'due date'. Using the central registry (which the state provides at no cost to practices and CHTs) as a clinical tracking system is particularly useful for practices that don't have an Electronic Medical Record (EMR). An enhanced version of Covisint DocSite, available to practices for a fee, can serve as a more complete Electronic Health Record that meets national standards for meaningful use. The Blueprint registry is also useful as a centralized tracking system for providers (e.g. care coordinators, CHT members, SASH Teams) that are working with patients who receive services in different practices and organizations. Each of these practices and organizations may have different EMRs and/or other tracking systems. The registry can effectively function as an integrated health record for patients receiving care in a 'community system of health' that includes both independent providers and organizations.

Architecture supports Blueprint registry as a reporting system for population management and performance reporting. The web based centralized registry (Covisint DocSite) is capable of flexible reporting. Providers can easily and independently create reports for various 'population level' activities such as identifying patients who have not had recommended assessments for their health conditions, or patients who have assessments with results that need follow up. These reports can be generated and used by practice staff and Community Health Team members to proactively reach out to patients and coordinate services. Providers can also create comparative performance reports that show the rates at which their population is achieving healthcare and health related goals. Comparative reports can be shown at several levels, including: providers within a practice, across independent practices and organizations, and across HSAs within the state. These types of performance reports can help to guide ongoing quality improvement, Learning Health System activities, and payment reforms based on measures of quality. The reporting capacity in the registry helps practices to meet NCQA Patient Centered Medical Home recognition standards, Office of the National Coordinator meaningful use standards, and other important reporting requirements. This type of flexible reporting that can be easily used by clinicians and staff is not routinely available in EMR systems.

2.5 Evaluation Infrastructure

The Blueprint program has worked to build the capacity to evaluate the impact of these reforms, and to guide the activities of a Learning Health System (LHS), or a healthcare system that uses data and experience to continuously improve itself in a systematic and objective manner. As with all aspects of the program, the Blueprint is taking a systems based approach to evaluation with data and reporting systems that are routinely populated as providers go about their day delivering health services. A summary of the components that make up the Blueprint evaluation infrastructure is found in **Table 3** on the next page.

Table 3. Major Components and Status of the Blueprint Evaluation Infrastructure

Data Sources	Databases	Measures	Reporting	Status
Data feeds from EMRs and Hospitals through Vermont Information Technology Leaders (VITL) health information exchange network. Direct use of registry as health services tracking system by practices and other service providers.	Web based central clinical registry. Developed and hosted by Covisint - DocSite.	<ul style="list-style-type: none"> ▪ Clinical Processes ▪ Health Status ▪ Performance ▪ Comparative Effectiveness 	<ul style="list-style-type: none"> ▪ Web based flexible reporting by registry system ▪ Feeds to University of Vermont (UVM) Informatics Platform 	<ul style="list-style-type: none"> ▪ Active data transmission and reporting ▪ Expand interfaces and data transmission in collaboration with VITL as Blueprint expands statewide
Data feeds (demographic & paid claims data) from insurers. Common format allowing integration into single data base.	Multi-payer claims database. Developed and hosted by Onpoint Health Data.	<ul style="list-style-type: none"> ▪ Healthcare Patterns ▪ Resource Utilization ▪ Healthcare Expenditures ▪ Performance ▪ Comparative Effectiveness 	<ul style="list-style-type: none"> ▪ Analysis & standard reports generated by Onpoint Health Data ▪ Includes detailed evaluation of utilization & costs for patients treated in Blueprint model with comparison cohorts. ▪ Feeds to UVM Informatics Platform 	<ul style="list-style-type: none"> ▪ Complete data sets from all commercial insurers. ▪ Vermont Medicaid implementing data transmission ▪ Work beginning with CMS to get Medicare data sets
Data sets from hospital, practice, and insurer administrative data systems. Supplied by Information Technology staff at hospitals for hospital affiliated practices.	Data sets maintained and analyzed by Jeffords Institute at Fletcher Allen Health Care	<ul style="list-style-type: none"> ▪ Emergency Room Visits ▪ Hospital Admissions ▪ Utilization rates as affiliated practices transition to Blueprint model 	<ul style="list-style-type: none"> ▪ Analysis & standards reports generated by Jeffords Institute at Fletcher Allen Health Care. ▪ Includes trends over time in hospital based care for patients treated in Blueprint model 	<ul style="list-style-type: none"> ▪ Data and early trends available for hospital affiliated practices available from Blueprint pilot communities ▪ Medicaid preparing data set across communities
Structured chart reviews in primary care practices conducted by Vermont Child Health Improvement Program (VCHIP) based at the University of Vermont (UVM)	Chart review data set maintained and analyzed by VCHIP at UVM	<ul style="list-style-type: none"> ▪ Clinical Processes ▪ Health Status ▪ Performance ▪ Comparative Effectiveness 	<ul style="list-style-type: none"> ▪ Analysis and standard reports generated by VCHIP / UVM ▪ Includes analysis of healthcare quality and health outcomes, trends over time 	<ul style="list-style-type: none"> ▪ ~ 4500 charts reviewed annually. ▪ ~ 4 years of data available thru CY 2010 ▪ Early trends available for pilot and comparison communities
Structured scoring of practices based on National Committee on Quality Assurance Physician Practice Connections-Patient Centered Medical Home (NCQA PPC-PCMH) standards conducted by VCHIP at UVM.	NCQA PPC-PCMH scoring data set maintained and analyzed by VCHIP at UVM	<ul style="list-style-type: none"> ▪ Clinical Processes ▪ PCMH Standards 	<ul style="list-style-type: none"> ▪ Analysis & standard reports generated by VCHIP at UVM ▪ Includes analysis of the relationship between NCQA PPC- PCMH standards, clinical quality, and health status measures from chart review 	<ul style="list-style-type: none"> ▪ Baseline NCQA PPC-PCMH Scoring available for practices in pilot communities. and in near term expansion communities ▪ Repeat scoring available in select practices
Structured qualitative assessments using focus groups, interviews and surveys (CAHPS-PCMH) addressing the experience of practice based providers, community health team members, and patients. Conducted by VCHIP/UVM.	Qualitative assessment data maintained and analyzed by VCHIP/ UVM Statewide CAHPS-PCMH planned for 2012	<ul style="list-style-type: none"> ▪ Consistent trends and key findings based on the experience of practice based providers, community health team members, patients. ▪ Strengths, challenges, recommendations for improvement 	<ul style="list-style-type: none"> ▪ Analysis & standard report generated by VCHIP/UVM ▪ Statewide CAHPS-PCMH for VT and comparative effectiveness reporting 	<ul style="list-style-type: none"> ▪ Early findings available for Blueprint pilot communities and one comparison community ▪ CAHPS-PCMH starting in early 2012
Hospital Discharge data through Vermont Department of Banking, Insurance, Healthcare Administration (BISHCA). Behavioral Risk Factor survey data, and Youth Risk Factor survey data generated by Vermont Department of Health (VDH)	Public Health Registries maintained and analyzed by VDH Epidemiology & Statistics Section.	<ul style="list-style-type: none"> ▪ Rates of hospital admissions, emergency care, procedures, associated charges, demographic risk factors, social risk factors, economic risk factors, behavioral risk factors, clinical risk factors 	<ul style="list-style-type: none"> ▪ Analysis & standard reports generated by the VDH Statistics Section ▪ Includes mapping and trends over time for multiple variables related to chronic conditions. 	<ul style="list-style-type: none"> ▪ Report available that includes 10 year trends in Vermont. ▪ Useful for planning health services strategies and tracking change over time at a population level
Data feeds from multi-payer claims database (Onpoint) and central clinical registry (Covisint DocSite) currently planned. Potential for other data sources (e.g. public health registries).	Integration of data and merged database maintained by Center for Translational Sciences at UVM	<ul style="list-style-type: none"> ▪ Clinical process ▪ Health status ▪ Utilization ▪ Expenditures ▪ Predictive modeling 	<ul style="list-style-type: none"> ▪ Web based flexible reporting from novel statewide integrated informatics platform (e.g. merged clinical, utilization, and expenditure data) ▪ Data sets for advanced analytics. 	<ul style="list-style-type: none"> ▪ Informatics platform under development at UVM ▪ Data sharing agreements between for multi-payer claims data and central clinical registry data

The Blueprint evaluation infrastructure is assessing multiple dimensions of the program, including the quality of health services, health outcomes for individuals and populations, utilization of healthcare resources, and healthcare expenditures. Active use of these varied data sources is increasing, generating reports to assist with outreach and patient care, evaluation of program impact, and support of quality improvement activities. The process is underway to develop an 'integrated' web-based informatics platform at the University of Vermont. This platform will be used to merge data from the various sources creating novel data sets for advanced analytics, research, and predictive modeling. The components of the Blueprint evaluation infrastructure follow.

Centralized clinical registry (Covisint DocSite). The Blueprint's web-based registry, hosted by Covisint DocSite, receives feeds of guideline based data elements from practices and hospitals. Data sources include Electronic Medical Record systems, hospital data systems, practice management systems, and direct data entry. Data from these sources is sent to the registry through Vermont's Health Information Exchange infrastructure run by Vermont Information Technology Leaders (VITL). In addition to patient care and population management, the registry supports flexible performance reporting with measures derived from national guidelines on healthcare quality and outcomes. Comparative reporting with benchmarking is designed so that practices can see how their providers compare internally. Practices and organizations can see how they compare to other practices and organizations, HSAs, and results for Vermont overall. Data that is transmitted to the registry is collected as part of normal daily healthcare activities, and recorded in EMRs, hospital data systems, or in the registry itself. Sites that are transmitting data can use registry reporting to track performance and guide their quality improvement activities. The registry can also be used to track changes in the health of populations, and the relationship between health and the quality of health services. As more sites are connected, and more complete data is transmitted, the registry will be a critical part of a sustainable infrastructure to support high quality healthcare and a Learning Health System.

Multi-payer claims database (Onpoint). The Blueprint has worked with Vermont's Department of Banking, Insurance, Securities, and Healthcare Administration (BISHCA) and insurers to expand the capacity of the state's multi-payer claims database so that it can support highly rigorous evaluations. As part of the Blueprint's reforms, insurers attribute patients to APCs for payment based on the practice's score as a Patient Centered Medical Home. Once a patient is attributed to a practice, insurers attach a flag to the patient's paid claims files that are transmitted to the multi-payer claims database (hosted by Onpoint). These flagged patients can be identified in the multi-payer database as participants in the Blueprint model. This allows for analysis of trends and outcomes in Blueprint patients as compared to patients treated in traditional healthcare settings. To achieve this, the Blueprint has worked with Onpoint, The Dartmouth Institute, and the Brookings Institution to design and implement a method for identifying a matched population that is similar in many characteristics to the flagged participants who are receiving care in the Blueprint model. This matched comparison group is used to compare trends and outcomes for Blueprint participants with similar patients treated in traditional healthcare settings. Claims data that insurers transmit to the database is collected as a routine part of billing and payment. The combination of insurers flagging Blueprint participants, and Onpoint's use of a structured approach to select a matched comparison population, allows for advanced analyses with claims data that is routinely collected by all insurers. With this approach, the impact of the Blueprint model on healthcare patterns and expenditures can be evaluated on a regular basis.

Chart review (University of Vermont Child Health Improvement Program-UVM VCHIP). The University of Vermont VCHIP team conducts a systematic review of ~4500 patient charts per year to determine trends in healthcare quality and outcomes. The UVM team has worked closely with the Blueprint team to design a structured evaluation of adherence with guideline based assessments and treatments for common chronic diseases, as well as the degree to which practices focus on patient centered goals and support for enhanced self management. This annual study supports an evaluation of trends over time as traditional practices transform and become officially recognized as Patient Centered Medical Homes supported by CHTs. Trends can continue to be studied as APCPs and CHTs continue to improve operations and participate in ongoing quality improvement as part of Vermont's Learning Health System. The evaluation is also designed to compare outcomes for Blueprint participants to similar patients treated in traditional healthcare settings, until there are an insufficient number of traditional practices to support a valid comparison.

Scoring of practices based on the National Committee on Quality Assurance (NCQA) standards for a Patient Centered Medical Home (Vermont Child Health Improvement Program at the University of Vermont (UVM VCHIP)). The University of Vermont VCHIP team conducts systematic scoring and rescoreing of practices based on NCQA Physician Practice Connections - Patient Centered Medical Home (PPC-PCMH) standards. NCQA PPC-PCMH standards demonstrate a primary care practice's adherence with important characteristics of high quality healthcare and well coordinated health services. The skilled UVM team has instituted a reliable, independent, and systems based approach to scoring that is consistent with the intent of NCQA and the use of their nationally accepted standards. This strengthens the credibility of the Blueprint program and the use of NCQA PPC-PCMH scores as the basis for Phase I payment reforms. This approach also assures consistency in the meaning of the scores which could not be assumed if practices conducted their own scoring (the routine process suggested by NCQA). The independent scoring and periodic rescoreing of primary care practices by an independent UVM team has established an objective basis for evaluating long term trends in Vermont, and for comparison against national benchmarks.

Public Health Registries & Hospital Discharge data set (Vermont Department of Health (VDH)) VDH maintains a number of databases and registries that can be used for modeling patterns at a population level and tracking change over time. The Blueprint team has worked closely with the VDH Center for Health Statistics to assemble an array of measures from these data sources that can be used to track changes in Vermont that may be influenced by the Blueprint Integrated Health Services model and the development of Community Systems of Health. Data sources for these measures include Vermont's Uniform Hospital Discharge Data Set, the Behavioral Risk Factor Surveillance System (BRFSS), the Youth Risk Behavior Survey (YRBS), the Adult Tobacco Survey, the Vermont Physician Survey, and United States Census Data. The VDH team has used these disparate data sources to construct integrated views on patterns of health, hospital based healthcare, and risk factors in the state. Results are presented for common chronic conditions and each Health Service Area. These complex analyses provide important information that can be used for planning operations in a transformed environment where APCPs and CHTs work together as part of an integrated Community System of Health. The analyses also establish a basis for tracking change over time to determine whether the Blueprint's Integrated Health Services approach is associated with changes in risk factors and health at a population level.

University of Vermont Informatics Platform (University of Vermont Center for Clinical & Translational Sciences (UVM CCTS)). The Blueprint is working closely with the UVM CCTS team to develop an informatics platform that can be used as a centralized system for advanced analytics, research, and predictive modeling. The platform will be used to integrate claims from the Onpoint multi-payer database, and clinical data from the Covisint DocSite central registry, as well as data from additional sources (e.g. hospital data sources, vital statistics, and public health registries). De-identified claims data from the multi-payer database (Onpoint) and de-identified clinical data from the central registry (Covisint DocSite) are being transmitted to the UVM platform. The data sets will be merged using ‘probabilistic’ matching methods. This will establish a novel statewide integrated database that includes claims and clinical data from disparate sources. The UVM platform will include a web based workbench or dashboard that can be used for comparative outcomes and performance reporting. Data sets will be available for advanced research and generation of predictive modeling. Over time, predictive models will be available to advance the sophistication of the web based reporting platform. The platform will establish ready access to data in innovative ways to support Vermont’s Learning Health System and high quality health services.

2.6 Building a Learning Health System

Vermont’s political, medical and sociologic culture supports high quality healthcare; the state has a well-established history of disparate interest groups and stakeholders working together on quality initiatives. As part of its overall delivery system reforms, the Blueprint has worked to build on this culture and to establish an infrastructure that can support ongoing data guided quality improvement. The infrastructure consists of the data sources, analytics, reporting, and skilled facilitators that are necessary to sustain direct support at the primary care practice level. The ultimate goal is a sustainable infrastructure with a systems based approach to Learning Health System activities in support of patient centered, high quality, seamless health services (medical and non-medical).

Expansion and Quality Improvement Program (EQuIP). EQuIP consists of a team of Practice Facilitators that assists adult, family, and pediatric primary care practices with their transformation into APCPs and continuous quality improvement efforts. EQuIP currently includes 13 Practice Facilitators who are assigned to work with 10-15 practices each. The Blueprint plans to contract with two additional facilitators in the near future.

The EQuIP includes a team of highly skilled and trained facilitators who function as the ‘1 800’ go to people for the practices they support in each Health Service Area (HSA). Facilitators are trained to develop relationships and work with the providers they support on data guided cycles of improvement in a wide range of processes. They are supported by the Blueprint’s evaluation infrastructure (in partnership with UVM), with access to comparative effectiveness and performance reporting to help guide their activities.

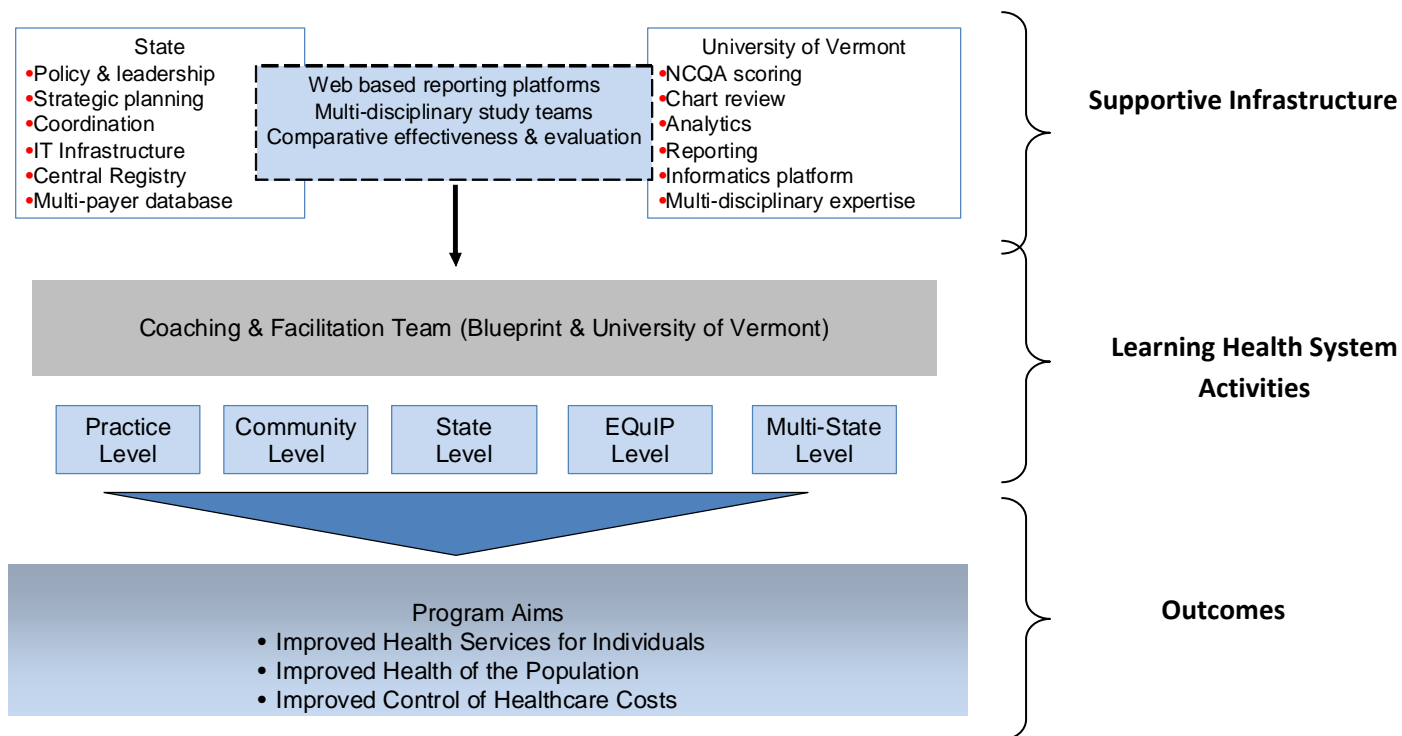
The overall EQuIP model incorporates resources developed as part of state led health reform into a functional, dynamic, “on-the-ground” quality improvement infrastructure. Components of EQuIP include the following: data sources, the health information infrastructure that feeds them, the Blueprint’s evaluation and reporting program, the team of trained Blueprint facilitators providing

general ongoing support to practices and providers, additional facilitators from other organizations that offer targeted expertise as needed, and a wide range of quality improvement activities in which the facilitators participate. Facilitators work directly with individual providers and practices, participate in group learning activities, meet as a team to share lessons learned and expertise related to the facilitation process, and receive training from facilitators and experts in other programs across the country and in Canada. The EQuIP establishes a stable infrastructure that can help translate visionary policy into real world operations and sustainable change.

EQuIP practice facilitation work will include:

- **Change Theory** Acquiring and teaching change theory and applying these skills to improving the delivery of health care services
- **Practice-based team development.** Facilitating ownership and support for Continuous Quality Improvement (QI) at each primary care practice to improve patient centered care. The facilitators help guide practice teams to improve care and efficient use of resources by tailoring established QI approaches to “real life” practice settings and issues. The facilitators use and teach the Model for Improvement and the Clinical Microsystems curriculum, incorporating these tools into daily practice to improve care and measure change. To achieve these objectives, facilitators will attend weekly or bi-weekly meetings with the multi-disciplinary practice teams.
- **NCQA preparation.** The facilitators assist practices in evaluating how well they are performing against the NCQA PPC-PCMH standards and develop action plans as outlined in the Scoring Timeline by the Blueprint for Health; timeline will include development of a binder identifying the practices’ current state of readiness for change.
- **Patient Centered Care.** Supporting practice teams in the implementation of rapid change cycles into clinical practice. These cycles may focus on such topics as shared decision making, self management support, or mental health and substance abuse treatment into clinical practice.
- **Community Health Teams.** Facilitators support the incorporation of the CHT resources into practice workflow by working with the practice and CHT to establish and then document the workflow and referral process to the CHT in the primary care practice.
- **Learning Health System.** Participating in biweekly phone calls, regularly scheduled meetings of the practice facilitators, and other ad-hoc conference calls, meetings, or trainings with Blueprint staff, CHT staff, Covisint DocSite Clinical Quality Advisers, Vermont Information Technology Leaders support staff and other practice facilitators. In addition, they receive training from facilitators and experts in other programs across the country and in Canada.

Figure 3. Blueprint Expansion and Quality Improvement Program (EQuIP)



Coordination with Outside Practice Support & Quality Improvement Initiatives. The Blueprint team is working closely with several organizations in Vermont so that EQuIP can be part of a coordinated and systems based infrastructure to support transformation and quality improvement. The opportunities for a systematic approach to quality improvement are substantial with the expansion of the Blueprint Integrated Health Services model, the newly instituted EQuIP infrastructure, and the growth of federally-funded initiatives related to healthcare reform and health information technology. In this dynamic environment there is the potential to coordinate transformation efforts. Without coordination it is possible for disparate unrelated efforts to be redundant, wasteful and even to impair each others’ efficacy. Specific examples are highlighted below:

Vermont Child Health Improvement Program at the University of Vermont (UVM-VCHIP). UVM-VCHIP serves as an essential partner in the development, support and evaluation of the Blueprint. Through a federal Children’s Health Insurance Program Reauthorization Act (CHIPRA) grant awarded jointly with Maine, VCHIP has hired 2 full time practice facilitators. This has expanded the size and scope of the EQuIP team to prepare over a dozen pediatric and family medicine practices for NCQA PPC-PCMH recognition in the last year. The VCHIP practice facilitators serve as content experts in pediatrics for the EQuIP team.

UVM-VCHIP supports staffing to score primary care practices for NCQA PPC-PCMH recognition through Blueprint funding for all primary care groups and CHIPRA for pediatric and family medicine groups with significant pediatric populations. The UVM VCHIP team has the capacity to evaluate and score 70-80 practices per year.

UVM-VCHIP continues to serve as a leader and resource statewide. It runs statewide learning collaboratives related to pediatrics and continues its well-received practice-based quality improvement programs. It has embraced the Blueprint as a central mechanism for health care system improvements via the CHIPRA grant and otherwise. In particular, VCHIP staff members have identified and clarified pediatric data elements and measure sets for the Blueprint's central registry (Covisint DocSite). As statewide and national leaders, they define important areas of Pediatric focus for APCPs and CHTs in collaboration with the Blueprint staff, pediatric and family medicine leaders in Vermont, the American Academy of Pediatrics, and the American Academy of Family Practice.

Information Technology Partners – Introduction. There is no doubt that the improvements in quality and efficiency of the healthcare system are dependent upon the ability to transmit accurate information in a timely manner. The Blueprint works closely with multiple partners in order to provide the capacity for timely and accurate communication of health care information.

Information Technology Partners - Vermont Information Technology Leaders (VITL). VITL Interface Project Managers work directly with practices to coordinate work with electronic medical record (EMR) vendors, and to develop interfaces between EMRs and the Vermont Health Information Exchange network (VHIE) so that data can be transmitted through the HIE to the Blueprint registry (Covisint DocSite). They coordinate with the Covisint DocSite team to assist practices to make sure that data transmitted through the HIE to the central registry is accurate. The VITL Regional Extension Center (REC) team (another arm of the organization) works with practices to assist with implementation of new EMR systems and achieving meaningful use criteria as defined by the Office of the National Coordinator (ONC) in the Department of Health and Human Services (HHS). VITL Interface Project Managers and REC team members coordinate with Blueprint EQiP facilitators to support practices with EMR work and linkage to the overall health information infrastructure.

Information Technology Partners - Covisint DocSite. Technical and clinical support staffs work closely with the Blueprint team and providers in Vermont to develop a core Blueprint dictionary of data elements and measures that serve as the basis for clinical decision support and tracking. Based upon up-to-date national guidelines and vetted by Vermont-based clinicians, these data elements and measures are related to a broad range of issues including recommended age and gender-appropriate health maintenance and prevention, and recommended assessments and treatments for patients with chronic conditions, care coordination, and population management. They work closely with the Blueprint team to develop the program's web enabled central registry based on the core data dictionary and measure set, as well as hosting and maintaining the registry.

Supporting practices as they make the transition to effective use of a registry requires reliable and accessible technical and clinical support. Covisint DocSite staff works directly in practices to assist with mapping of the registry data elements and measures to their EMR systems. They help with planning modifications to EMRs in order to optimize use of guideline based data elements and measures. They dedicate time to the practices to assist with use of the registry for individual patient care and population management, which includes both training and technical support related to the registry. DocSite Clinical Quality Advisers train EQiP facilitators on the use of the registry so they can in turn assist practices and use performance reporting for data guided quality improvement work. Collaboration with VITL Interface Project Managers and REC staff is evolving to make sure that vendors have plans for EMR updates.

As the Blueprint expands into specialty medical areas, the DocSite Covisint team is engaged with other service providers to develop the data dictionaries and measure sets so that the registry can serve as an integrated record across a broad range of health related services (medical and non-medical). Examples of ongoing work include the development of measure sets for congestive heart failure, depression and for tracking of CHT activity.

Bi-State Primary Care Association (Bi-State). Bi-State is funded by the Blueprint for an EQuIP facilitator who works in Federally Qualified Health Centers (FQHCs) and Rural Health Centers (RHCs). This facilitator works in two Health Service Areas in preparation for NCQA PPC-PCMH recognition scoring, and serves as a content expert for the EQuIP team regarding FQHC-specific needs.

Statewide, Bi-State supports FQHC and RHC learning collaboratives and trainings. It also provides its member health centers with targeted support to link their EMR systems to the VHIE, transmit data to the Blueprint registry, and meet specific FQHC/RHC reporting requirements in the registry.

Vermont Department of Health (VDH). The Division of Health Promotion and Disease Prevention at VDH is working closely with the Blueprint team on the Healthier Living Workshop (HLW) program that has been implemented statewide. This program is designed to assist patients with chronic conditions with enhanced self management skills including healthy lifestyles and engagement with preventive treatments that can improve control of their chronic conditions. This program is an important part of a continuum of enhanced self management support extending from Patient Centered Medical Homes and Community Health Teams to community based programs.

The Center for Health Statistics at VDH works closely with the Blueprint team to conduct analyses and report on patterns of risk factors, chronic conditions, health status, and hospital-based care around the state. These reports are useful for providers (medical and non-medical) to plan Integrated Health Services in their communities, and for tracking change over time.

VDH staff and Blueprint team periodically collaborate on topic-specific learning activities and trainings for providers. Examples include:

Collaboration with the Vermont Department of Health Asthma Program and North Country Hospital, where a team of Blueprint practice facilitators and respiratory therapists have been working on planning an Asthma Learning Collaborative. Beginning in the January of 2012 and ending in the June of 2012, between 4 and 6 primary care practices will participate in a Learning Collaborative designed to help practices implement the NHLBI/NAEPP asthma guidelines and improve the outcomes of patients with asthma.

The VDH Diabetes Program Director, in collaboration with experts at the University of Vermont, has created a one-page Guide to Diabetes Care based on the ADA's 2012 Clinical Practice Recommendations. This will be reviewed and adopted by the Blueprint Provider Advisory Group and distributed statewide as well as in downloadable form at <http://healthvermont.gov/prevent/diabetes/diabetes.aspx>

VDH District Office Directors are invited to participate with the Integrated Health Services planning groups in each Health Service Area. The goal is for local VDH staff to work closely with Community

Health Team members and practices to improve access to public health programs as part of an Integrated Health services model.

2.7 Blueprint Statewide Expansion

Introduction. Vermont Act 128 of 2010 calls for statewide expansion of the Blueprint model with at least two primary care practices in each Health Service Area participating by July 2011, and all willing providers by October of 2013. We are pleased to report that the July 2011 goal was met or exceeded in all of Vermont's original 13 HSAs with only one exception. Since then, we have added an additional HSA in the Little Rivers area, and by April 1, 2012 all 14 HSAs will have achieved the stated goals. The expansion includes all aspects of the Blueprint model; all-insurer payment reforms, preparation of traditional primary care practices to operate as Patient Centered Medical Homes (PCMHs), scoring and official recognition of primary care practices through the NCQA PPC-PCMH program, planning and implementation of the core CHTs in each service area, expansion of and coordination with CHT extenders in each service area (Medicaid Care Coordinators, SASH teams), and connection of practice information systems and extension of the health information architecture to each service area. EQuIP facilitators are working with practices and other stakeholders in each HSA to assist with planning and implementation of the program. As outlined in the Blueprint Implementation Manual, local community planning workgroups are planning the design of the CHTs including staffing, integration with PCMHs, and coordination of services with CHT extenders and other community services. The Blueprint's evaluation program is growing simultaneously with population of the various data sources, and the capacity for highly structured reporting that can guide Learning Health System activities based on comparative effectiveness. The expansion underway is a "Vermont-sized" test of the scalability and generalizability of the Blueprint model.

Expansion at the local level. The Blueprint framework priorities must occur with leadership at the local level. The difficult task of achieving consensus has been addressed successfully in many areas of the state. The following brief descriptions illustrate the healthy variety of approaches to this process.

Middlebury Health Service Area. Porter Medical Center is the administrative entity in this HSA. There had been some concern on the part of several independent practices that their access to resources would be limited in favor of supporting the practices owned by the hospital. The stakeholders spent a great deal of time in active discussion and negotiation over many months, culminating in an extremely well attended (over 40 individuals) kick-off meeting in January of 2011. At that point, the community created multi-stakeholder volunteer committees to determine the Community Health Team structure and to deal with the complex information technology challenges ahead. Despite the early intra-community difficulties, this HSA quickly achieved strong and effective working relationships, integration of social service organizations, and NCQA PPC-PCMH recognition as well as Meaningful Use recognition of local practices, both independent practices and those owned by Porter Medical Center.

Upper Valley Health Service Area. It was brought to the attention of the Blueprint staff in 2011 that there were several practices in the eastern border of the state that are geographically in Vermont and serving predominantly Vermonters, but were affiliated with Cottage Hospital in Woodsville, New Hampshire. This activated area chose to pursue Blueprint participation through the administrative leadership of the local Federally Qualified Health Center, Little Rivers Health Care, which has 3 clinics

and a strong infrastructure and community presence. Two independent primary care practices are also participating; they are in fact the first practices being evaluated and scored in this newly-formed HSA. Their planning document clearly illustrates their commitment to the collaborative process, as illustrated below:

Improved access to well-coordinated preventive health services and chronic disease care that is timely and centered on the needs of patients and families. We will accomplish this, as the authors of the Blueprint design so aptly explained it: “by establishing a functional continuum of care across sectors that are not commonly well-integrated (e.g. healthcare delivery, mental health & substance abuse services, social & economic services, public health services).”

This will include:

- *Coordination and management of specialty care referrals and interactions.*
- *Facilitation of transitions of care between acute and primary care settings.*
- *Identifying qualified patients and referring them to appropriate clinical trials.*
- *Development of more robust clinical data capture and analysis, which will improve quality of care and enable more consistent and comprehensive outreach.*

Reduction of socio-economic disparities among residents in this service area. This will be accomplished by increasing screening rates and treatment completion rates. Individuals at risk will be identified and provided with:

- *assistance in scheduling appointments with culturally sensitive caregivers*
- *information and education*
- *transportation assistance*
- *translation/interpretation services*
- *assistance in overcoming other barriers to care*

Increased patient satisfaction with health care and health system experience. Patient satisfaction will be assessed by the use of surveys and frequent, less formal “check ins” by all members of the coordination team.

Decreased avoidable complications in those with chronic disease. This will be accomplished through the use of evidence-based protocols; tight tracking of referrals, follow-up appointments, results of testing, treatment response, and coordination of all aspects of the patients care, as well as transitions of care.

Community Planning. LRHC will convene a collaborative planning committee, composed of representatives from area health and human service providers, community service organizations, and the Vermont Department of Health to assess local needs and resources. This committee will establish 2 local planning workgroups: an Integrated Health Services (IHS) workgroup and a Health Information Technology (HIT) workgroup.

The IHS workgroup will determine the composition of the community health team, develop strategies for coordinating health services, and address the logistics for NCQA scoring of participating primary care practices.

The HIT workgroup will provide a forum for leaders from each participating practice and organization to work with Vermont Information Technology Leaders (VITL) to plan and implement participation in Vermont's Health Information Exchange network.

The following local providers and organizations will be encouraged to actively participate in this project and send representation to the collaborative planning committee:

- *Upper Valley Pediatrics (UVP)*
- *Newbury Health Clinic (NHC)*
- *Clara Martin Center*
- *Cottage Hospital*
- *Visiting Nurses Association*
- *Doug Speck and Heidi Johnson (independent psychologists)*
- *School nurses from Waits River Valley School, Bradford Elementary School, Oxbow High School, River Bend Career and Technical Center, Blue Mountain Union School, Newbury Elementary School, Rivendell School District.*
- *Upper Valley Ambulance*
- *Vermont Department of Health, WRJ District*
- *Barton Dental*
- *Consumer representative*
- *Others yet to be determined*

Presentations and orientation materials will be provided for the collaborative planning committee, and notification and documentation of meetings will be done in accordance with Blueprint guidelines. This team will be lead by the RN Project Manager. Effort will be made to ensure multi-disciplinary representation as well as including representation from the above groups.

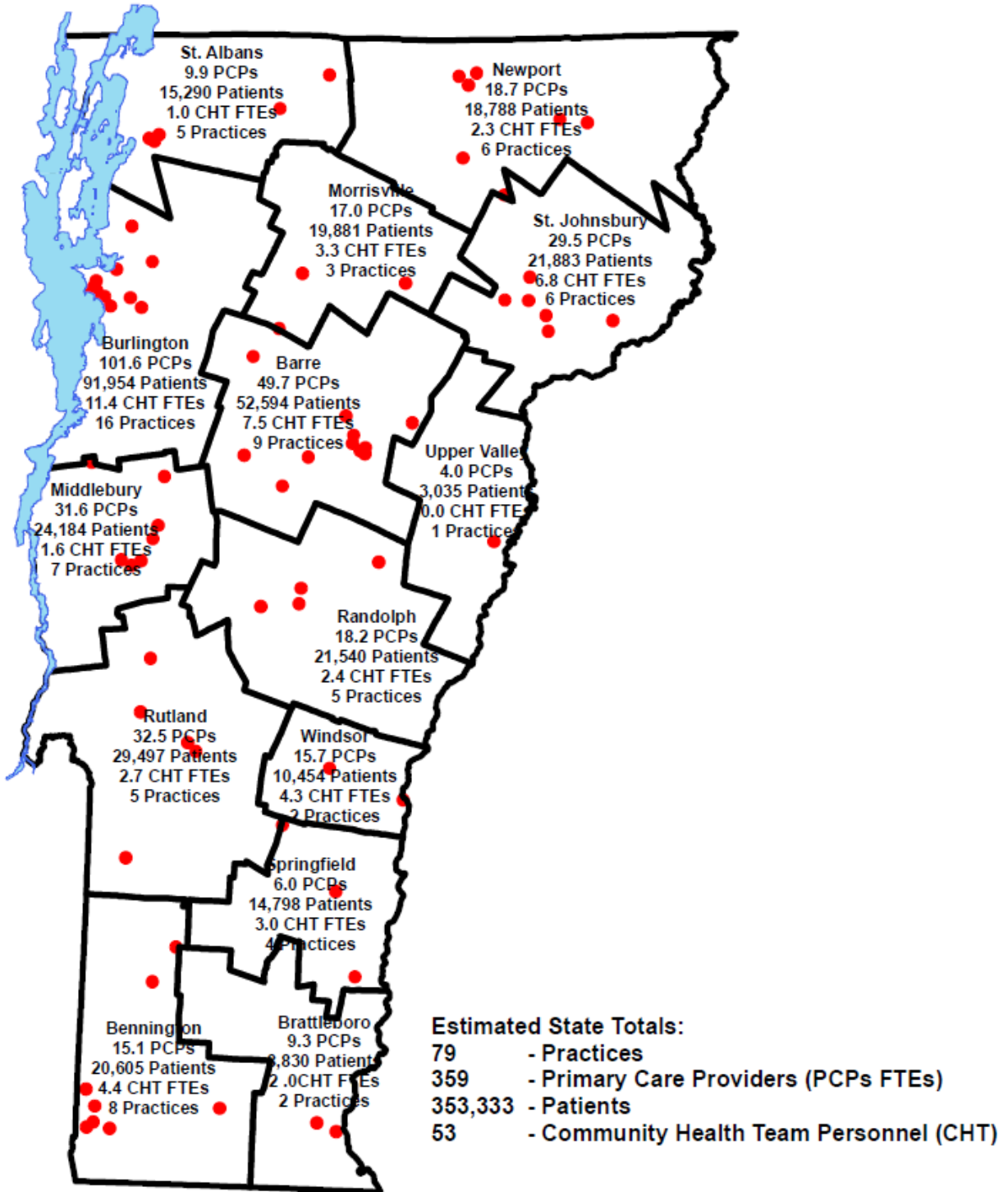
Newport Health Service Area. The far northeastern part of the state is now fully engaged in the Blueprint. While neighboring St. Johnsbury was an original pilot community, the farther reaches of the “Northeast Kingdom” have been successfully preparing for becoming an Integrated Health Service area in other ways. One of the member practices of Northern Counties Health Care, the FQHC based in the St. Johnsbury area, was the first Newport practice to be recognized by NCQA (in 2010). North Country Hospital made a significant commitment to the model with the pre-emptive hiring of Community Health Team staff and the construction of a new primary care practice building, designed with the integration of the CHT and efficient practice flow in mind. The process of planning for the development of the CHT demonstrably engaged a wide spectrum of stakeholders, bringing in hospital-owned, FQHC-owned and independent practices alike. Of note is that the highest initial NCQA PPC-PCMH recognition score in Vermont to date was achieved by Thomas Moseley, MD, an independent Newport pediatrician.

Expansion in 2011. The Blueprint met or exceeded its target of statewide expansion as outlined in legislation. All of Vermont's 14 Health Service Areas have some implementation of the Blueprint Integrated Health Services model, a remarkable achievement and the result of unprecedented multi-stakeholder collaboration and support. **Table 4** and **Figure 4** illustrate the scale of the expansion to date.

Table 4. Blueprint Participants – January 2012

	Practices	PCP Clinicians	PCP Clinician FTEs	CHT FTEs	Patients
Hospital Owned Practices	37	224	195	27	181,429
Independent Practices	22	83	63	12	77,066
Federally Qualified Health Centers	20	124	101	14	94,838
Total	79	431	359	53	353,333

Figure 4. Blueprint Primary Care Practices and Community Health Teams – January 2012



2.8 Partnership with National Initiatives

Centers for Medicare and Medicaid Services (CMS). Vermont is one of 8 states chosen to be part of the Multi-payer Advanced Primary Care Practice (MAPCP) Demonstration (<http://www.cms.gov/DemoProjectsEvalRpts/MD/ItemDetail.asp?ItemID=CMS1230016>) through the Center for Medicare and Medicaid Innovation (Innovation Center, or CMMI). This extraordinary opportunity brings Medicare into the multi-payer payment reforms as a fully participating insurer. In addition, the Blueprint and other departments within the Agency of Human Services and the Green Mountain Care Board are engaged in working creatively with CMMI and CMS on such projects as the State Demonstrations to integrate care for dual eligible individuals (those who are eligible for both Medicare and Medicaid) and the Medicaid Health Home State Plan Option.

Institute of Medicine of the National Academies (IOM). The Blueprint Director serves as a member of the IOM Roundtable on Value and Science-Driven Health Care (<http://iom.edu/Activities/Quality/VSRT.aspx>), which has been convened to help transform the way evidence on clinical effectiveness is generated and used to improve health and health care. The stated goal is that by the year 2020, 90% of clinical decisions will be supported by timely and accurate information reflecting the best available evidence. The Blueprint Associate Director serves on the related IOM Evidence Communication Innovation Collaborative. The Blueprint Director also sits on the IOM Consensus Committee on the Learning Health Care Systems in America. This group has undertaken the study of transforming the current delivery system into one of continuous assessment and improvement for both the effectiveness and efficiency of health care.

National Multi-Payer Claims Database Governance Board. The Blueprint Director serves on this advisory board, convened by AcademyHealth. Commissioned by CMS in collaboration with OptumInsight, the board guides the project's public-private partnership with the goal of consolidating access to longitudinal data on health services to help facilitate comparative effectiveness research.

Multi-State Collaborative (supported by the Milbank Memorial Fund). Originally a grassroots gathering of several New England states doing similar PCMH work, this activated group successfully advocated for the CMS Multi-payer Advanced Primary Care Practice Demonstration. All the MAPCP states are members of the collaborative, which now includes Colorado, Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New York, North Carolina, Pennsylvania, Rhode Island and Vermont. Current projects include advocacy for CMS to continue its move towards a more flexible position regarding payment reform and data use, the creation a multi-state "crosswalks" of PCMH programs and clinical outcome measures, and the function of the group as a true multi-state learning collaborative. The group's activities, including support of an administrative fellow, are generously funded by the Milbank Memorial Fund (www.milbank.org).

Agency for Healthcare Research and Quality (AHRQ). The Vermont Blueprint staff joined 30 experts nationally and in Canada in the creation of the AHRQ *"Developing and Running a Primary Care Practice Facilitation Program: A How-to Guide"*. This was commissioned to support organizations interested in starting practice facilitation programs for primary care transformation. The focus on primary care transformation reflects the growing consensus that the U.S. primary care system must be redesigned in fundamental ways to ultimately improve health and patient experience and to lower costs. Vermont's

extensive experience and strong infrastructure influenced the guide's content. The official release of the guide will occur in mid to late January 2012. It will be found at the AHRQ Patient Centered Medical Home website, www.pcmh.ahrq.gov.

National Academy of State Health Policy (NASHP) provides a forum for constructive, nonpartisan work across branches and agencies of state government on critical health issues facing states. It has been a long-term supporter of the Blueprint, and Blueprint team members have shared their expertise and experience in multiple venues. Presentations at conferences and conference calls, policy brief preparation, serving on advisory groups and site visits have been part of this valuable collaboration. Topics addressed include payment reform, legislative approaches, Patient-Centered Medical Homes, Community Health Teams, Shared Decision Making, integration of mental health and substance abuse treatment, among others. More information can be found at <http://www.nashp.org/about-nashp>.

Registered Nurses' Association of Ontario (RNAO). The Blueprint Director serves as an adviser to the RNAO regarding best practices and quality improvement. <http://www.rnao.org/>

Site Visits. The Blueprint continues to generate a great deal of interest nationally, with frequent requests for interviews of staff, providers and Community Health Team personnel. Visitors this year came from the National Committee on Quality Assurance (NCQA), the Centers for Disease Control, the American Association of Retired Persons, the Milbank Memorial Fund, the Institute for Healthcare Improvement (IHI fellows from the United Kingdom), the Stoekel Center for Primary Care Innovation, Massachusetts General Hospital, and MAPCP demonstration participants from Maine, New York, North Carolina, Pennsylvania, Minnesota, Rhode Island, and Michigan.

2.9 New Developments in 2012

Expansion of scale. 2012 will bring further expansion to at least 45 of Vermont's pediatric, family medicine and primary care internal medicine practices, in accordance with statute. Practices are to be recognized using the updated 2011 NCQA PPC-PCMH standards, which have a strong emphasis on patient-centric support and electronic communication. Sufficient staffing for timely scoring of practices and the essential preparation support has been achieved through contracts and grants with VCHIP and the members of the EQulP team.

Expansion of scope. The scope of the Blueprint continues to be expanded with robust involvement of pediatric groups and engagement of specialists (cardiologists, pulmonologists, endocrinologists and psychiatrists) to plan and implement the next phase of payment reforms. Work is ongoing to update the Covisint DocSite registry with evidence-based guidelines to enable consistent tracking, evaluation and treatment of specific conditions, which will become part of the basis for these developing "Phase 2" quality-based payment reforms. Specific tracking datasets are being designed for the Community Health Teams and for Tobacco Cessation for testing and implementation in 2012.

Mental Health and Substance Abuse. The Blueprint is moving swiftly ahead to better integrate the identification and treatment of mental health and substance abuse with primary care and the holistic approach to individuals and patients. In collaboration with other state agencies (Department of Vermont

Health Access or DVHA, the Department of Mental Health, and the Division of Alcohol and Drug Abuse Programs, or ADAP), service providers and a mental health consumer, Blueprint staff developed three priorities to address health disparities in mental health and substance abuse.

1. Improve the capacity of patient-centered medical homes to provide mental health and substance abuse care to individuals who are primarily served in primary care and for individuals who are seeking medication assisted treatment for opiate dependence.
2. Create a systemic framework for the coordination of specialty substance abuse and mental health care with patient-centered medical homes for individuals with significant health, mental health, and/or addictions conditions.
3. To develop capacity within specialty substance abuse and mental health settings to provide coordinated health care for individuals served primarily in specialty programs.

Applying the Blueprint for Health cost and investment framework to current DVHA and ADAP expenditures shows promise to improve health outcomes and re-direct current funds in more effective ways. The Vermont Agency of Human Services (AHS) and Blueprint staff are working with community treatment providers to establish a seamless system of care that integrates physical health, mental health, and substance abuse services within the Blueprint. In SFY 2013, AHS will partner with Vermont communities to create a new approach to health care for Vermonters who require treatment for opiate dependency. This “Hub and Spoke” health system will adhere to evidence-based guidelines for opiate treatment and will include close collaboration with the APCPs and the substance abuse community providers.

Family Wellness Coaching (FWC) is part of the larger Vermont Family Based Approach developed at the University of Vermont that promotes mental health and wellness from a holistic family perspective. Based on evidence that emotional, mental health, and addictions issues run in families and that all families can benefit from support, each family in the program is partnered with a trained coach. The coach helps the family to carry out an individualized program of health and wellness, which may include exercise, nutrition, reducing time with television or computers, and increasing time spent together in fun and rewarding activities. In addition, the coaches help family members learn positive parenting and communication skills. The Blueprint is looking into training CHT and practice-based staff in FWC in 2012.

The 9th Vermont Blueprint for Health Annual Conference will be held on April 10, 2012 in Burlington, VT. Guest speakers include L. Allen Dobson, Jr., MD, an early leader and developer of the nationally recognized Community Care of North Carolina Medicaid managed care program, Carmen Hooker Odom, President of the Milbank Memorial Fund, and Mary D. Naylor, PhD, FAAN, RN, Professor in Gerontology and Director of the NewCourtland Center for Transitions at the University of Pennsylvania.

3. EVALUATION AND EARLY TRENDS

Introduction. The Blueprint Program is focused on the vision of a high quality, high value healthcare system. Absolutely essential is a systems-based approach to evaluation, with knowledge generation that

can be used to continuously refine and improve health services. The Blueprint has worked to build an evaluation infrastructure that supports this type of Learning Health System (LHS), guided by measurement across domains of healthcare quality, health outcomes, patient experience, and cost. Data sources have been identified and established, and evaluation methods are in place to monitor healthcare expenditures, claims-based patterns of care, direct assessment of health outcomes and the quality of care that patients receive, the rate that patients are engaged in activities that promote enhanced self management, and patient and provider experience.

As the Blueprint expands, the evaluation infrastructure is steadily growing and data systems are increasingly being populated, establishing a basis for objective evaluation, transparency, and a data guided LHS. For the first time, data is available to evaluate early multi-year trends that have emerged in the Blueprint pilot communities including: healthcare expenditures & patterns of healthcare resource utilization for commercially insured patients, the quality of care that patients are receiving, health status, and the experience of patients and providers (including Community Health Team staff).

Results for health care utilization, healthcare expenditures, and the financial impact of the Blueprint will be the primary focus of this report. As they are finalized, reports on each domain are made available at http://hcr.vermont.gov/blueprint_for_health.

Healthcare Expenditures and Resource Utilization. The Blueprint has worked closely with Onpoint Health Systems, the contractor that hosts and manages Vermont’s multi-payer claims database, known as VHCURES (Vermont Healthcare Claims Uniform Reporting and Evaluation System), to incorporate methodologies that support a well-structured evaluation of outcomes for participants in the Blueprint pilots compared to a matched control population for each community and statewide averages. Patients who are actively participating in the Blueprint’s Integrated Health Services model are defined as “participants”. The comparison population, or “controls”, includes patients who are actively receiving their primary care in the surrounding geographic area in traditional practices, without the changes brought about as part of the Integrated Health Services model (IHS).

Details of the methods and the results for key measures are included in the attached report prepared by Onpoint Health Systems (**Attachment 1**). Results to date are only for patients with commercial insurance from 2007 to 2010. Data for Medicaid and Medicare beneficiaries is not yet available. **Table 5** summarizes the year to year change (% change) for key measures in the two original pilot communities. Results shown are for the total participant population in the two pilot communities which includes: 7,442 Participants for 2007 to 2008; 7,679 participants for 2008 to 2009; and 8,071 participants for 2009 to 2010. The control population is matched to participants on a 1:1 basis for each time period.

In addition to **Table 5**, readers are strongly encouraged to review the attached report in order to understand the methods, populations included in the study, the results, and cautions related to interpreting the trends that are reported. It is important to note that in both pilot communities the Blueprint model was being implemented during the second half of Calendar Year (CY) 2008 and more fully operational during CYs 2009 and 2010. CY 2007 represents a baseline pre-intervention year. It is also important to note that patients in Blueprint pilot practices (“participants”) were older, higher cost at baseline, and more likely to have a chronic condition than the general population in the surrounding

communities and statewide. Controls were matched to participants to provide a comparison population with similar characteristics.

Table 5. Results of key measures on healthcare expenditures and utilization

Commercially Insured, Ages 18-64	Year to Year Growth (% Change)		
	2007 to 2008 Baseline	2008 to 2009 Startup	2009 to 2010 Operations
Total Expenditures per capita			
Participants	14%	5%	3%
Controls	17%	4%	10%
Statewide	7%	10%	4%
Inpatient Expenditures per capita			
Participants	12%	38%	-2%
Controls	50%	9%	34%
Statewide	17%	15%	4%
Outpatient Emergency Department Expenditures per capita			
Participants	32%	0%	3%
Controls	30%	6%	3%
Statewide	21%	8%	7%
Outpatient Hospital Expenditures per capita			
Participants	21%	3%	3%
Controls	24%	-1%	10%
Statewide	11%	11%	7%
Inpatient Admissions per 1000			
Participants	9%	-1%	-12%
Controls	14%	-10%	9%
Statewide	7%	1%	-2%
Outpatient Emergency Department visits per 1000			
Participants	15%	-11%	-9%
Controls	9%	-5%	-5%
Statewide	5%	-2%	-1%

The trends in Vermont are encouraging and suggest a reduction in the growth rate for important measures of healthcare expenditures and utilization. Favorable trends are observed for Participants, Controls, and the statewide commercially insured population. Between 2009 and 2010, growth rates for key measures appear similar or favorable for the Participant population as compared to the statewide general population. This is notable considering Participants are older with higher growth rates at baseline, and they are more likely to have chronic conditions. A similar pattern is observed for the Control population, although growth trends for some measures appear more favorable in the Participant population.

Several cautionary points should be highlighted when interpreting the results in **Table 5** or the more complete study (**Attachment 1**). The differences between Participants and Controls are generally not statistically significant due to a relatively small population size, and to wide variation in the results for each population during each time period. Results should be viewed as directional trends, and not as significant differences. Although overall trends appear favorable, results are variable from time period to time period. This is typical in studies with claims data, particularly when small populations are being evaluated. In addition, these results do not include data for the Medicaid and Medicare populations, which may significantly influence trends. Readers are referred to **Attachment A** for a more complete presentation of the results and methods.

Statewide Trends for Commercially Insured & Preliminary Return on Investment (ROI) Analysis. A number of quantitative projection and tracking tools have been developed in conjunction with the rollout of the Blueprint. Conceptually, these tools are built upon a relatively common architecture that includes defining a “Baseline” of projected expenditures by major category of service, a target population, program intervention impacts on expenditures, program investments to deliver those impacts, and a projected ROI calculation based upon projected savings (cost) vs. Baseline net of program investments.

During the ramp up stage of the Blueprint, these tools were based upon BISHCA data as presented in their annual Healthcare Expenditure Report and accompanying projected growth rates. With the population of data sets within VHCURES, the Blueprint now has access to actual expenditure data in close to real time. Currently, the VHCURES data base includes only commercial claims data, therefore limiting projection vs. actual tracking of Blueprint results. However, it is anticipated that Medicaid data will be available during the course of the first half of calendar year 2012 along with Medicare data shortly thereafter. Once fully loaded, VHCURES will provide a rich data base from which to conduct detailed analysis of Blueprint program clinical and financial results.

An example of output resulting from the use of one of the forecasting and tracking tools is presented in **Figures 6 and 7** below. The Baseline Projection is based upon a 2007 BISHCA growth forecast for the Private Pay population, applied to VHCURES actual 2007 expenditures for the statewide 18-64 age group. This is the same data that Onpoint used in generating their attached report and statewide trends highlighted in the section above. The “Baseline Projection” curve has been adjusted to reflect the actual number of beneficiaries in each year of analysis, which is substantially different than the number of beneficiaries that was projected in 2007. The “Onpoint Actual” curve reflects actual expenditures by year for this population. The “Baseline Projection Net of Savings (Cost)” curve represents the difference

between the Baseline Projection and Onpoint Actual expenditures, plus the investments that commercial insurers have made to support Patient Centered Medical Homes and Community Health Teams for a portion of the population.

Examination of the results of the analysis suggests the following observations:

- Both Baseline Projection and Actual annual change in expenditures for this population are trending downward. Without adjustment for the actual number of beneficiaries, the Baseline Projection would have trended upwards and significantly increased the Net Savings both on an incremental annual and overall expenditure basis. Adjustment of beneficiaries was not a consideration in the initial iterations of the model;
- As was anticipated in the initial iteration of the model, Baseline Projection Net of Savings (Cost) in the Blueprint startup years of 2008-2009 are modestly higher than the Baseline Projection;
- The gap between Baseline Projection and Baseline Projection Net of Savings (Cost) is narrowing as operations approach the third year. This was also anticipated in the initial iterations of the model;
- The rate of increase of incremental actual expenditures in 2010 was significantly less than Baseline Projection;
- By 2010, actual expenditures plus Blueprint investments were 1.6% higher than projected expenditures. The slower growth trend illustrated in **Figure 7**, despite investments, may be indicative of building momentum and potential impact of Blueprint interventions.

Figure 6. Annual incremental change in healthcare expenditures.

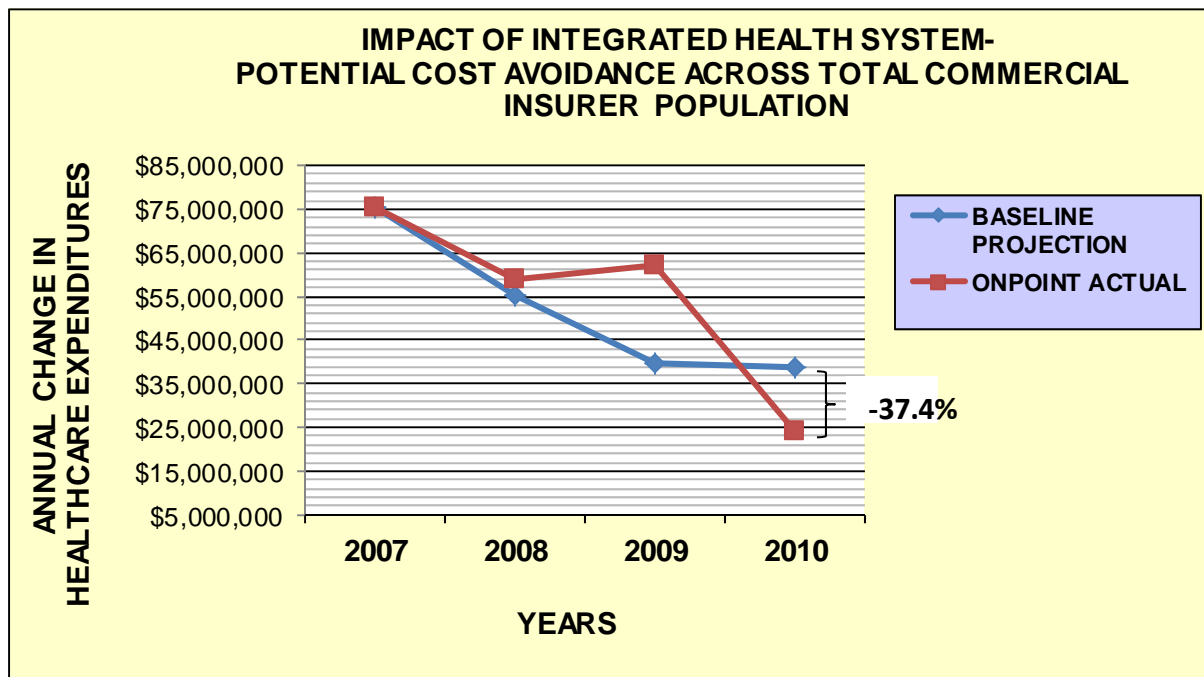
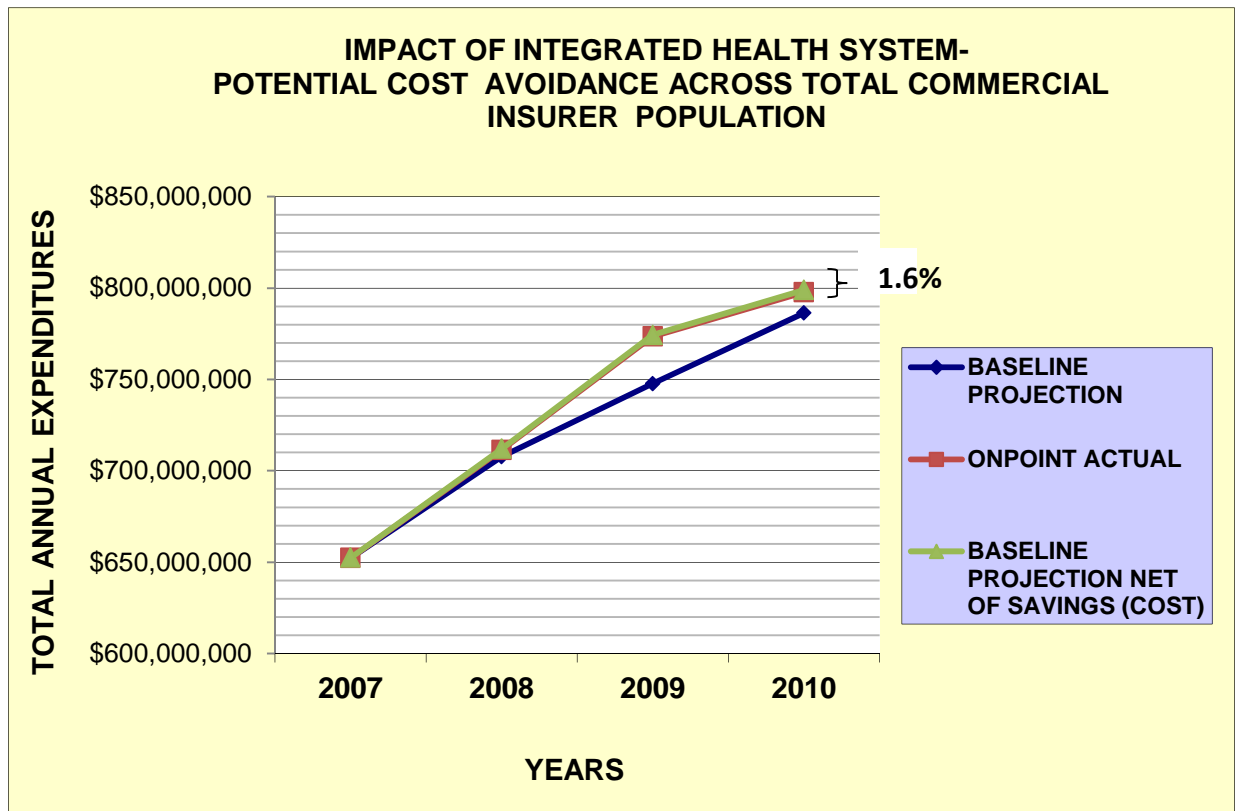


Figure 7. Trends in total healthcare expenditures.



It should be emphasized that these results are preliminary and are based, in part, upon limited resources and capacity for forecasting. However, they are suggestive of expenditure patterns and financial results that will gain greater clarity over time as the Blueprint matures and more complete actual data becomes available through VHCURES for analysis.

Qualitative Evaluation of Patient and Provider Experience. The impact of Community Health Teams on healthcare providers and consumers was studied by researchers by the Vermont Child Health Improvement Program at the University of Vermont (UVM VCHIP) in the first two Blueprint “pilot” Health Service Areas.

In order to gather first-hand insight into this experience, 16 primary care providers, primary care practice staff, and local Blueprint staff, as well as 22 patients from two of Vermont’s Health Service Areas (HSAs) were interviewed in the spring of 2011 about their experiences with their local healthcare systems. One key finding that emerged from these discussions was the benefit of Community Health Teams (CHTs) on the communities, primary care practices, and patients they work with. Patients served by practices with CHTs have noticed this shift from episodic to whole person, patient-centered care. As articulated by a group of primary care providers, primary care practice staff and other healthcare professionals who have begun working with two of Vermont’s CHTs, the addition of a small group of individuals has far-reaching consequences to the delivery of primary care. Communication both within practices and with

other healthcare providers has improved, as has the services practices are able to provide to their patient population. This progress has been observed by patients who report positive healthcare experiences and convey increased ability to manage their health.

The full report, *“Qualitative Evaluation of Provider and Practice Staff & Blueprint-Related Team Members and Patient Perceptions Related to Adoption of the Blueprint for Health in Two Vermont Communities”* can be downloaded at http://hcr.vermont.gov/blueprint_for_health

4. APPENDICES

4.1 Appendix A - 2012 Blueprint Budget Summary

		Description	SFY'12
STAFFING			
	Staffing 7 FTE		\$ 709,320
Sub-Total: Salaries and Benefits			\$ 709,320
OPERATING			
	Operating:		
	In-state travel (20K miles each @ \$.50/mile)		\$ 70,000
	Out-of-state travel		\$ 9,615
	Laptops & work stations Software		\$ 21,000
	Telephone-equip		\$ 1,400
	Q/data/telephone		\$ 6,720
	Space and overhead		\$ 70,000
	Supplies Allowance		\$ 17,500
Sub-Total: Operating			\$ 196,235
Total Salaries and Operating			\$ 905,555
Grant	HSA Grants		\$ 1,498,344
Sub-Total: HSA Grants			\$ 1,498,344
Contracts	Practice Facilitation Training		\$ 100,000
Contract	Practice Facilitators		\$ 320,000
Sub-Total: Facilitators			\$ 420,000
Grant	NVRH ADAP		\$ 27,500
Grant	FAHC ADAP		\$ 55,000
Grant	CVHC ADAP		\$ 55,000
Grant	Evaluation (VCHIP)		\$ 995,615
Grant	Elderly Services		\$ 10,300
Contract	Expanded Financial Modeling (LCCM)		\$ 90,000
Grant	Congestive Heart Failure (FAHC)		\$ 115,000
Contract	Informational Documents		\$ 20,000
Contract	BP Annual Conference (UVM)		\$ 18,500
MOU	VDH		\$ 80,000
Grant	Rural Health Alliance (Bi-State)		\$ 95,000
Sub-Total: other			\$ 1,561,915
Sub-Total: Grants Contracts and other			\$ 3,480,259
Total Blueprint budget to actuals			\$ 4,385,814
Transferred BUDGET			\$ 4,915,487
ADAP Funding TSF			\$ 165,000
TOTAL BUDGET			\$ 5,080,487

4.2 Appendix B – 2012 Blueprint Staff and Committee Membership

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Bea Grause, Executive Director, VT Association of Hospitals & Health Systems, Co-chair
Mark Larson, Commissioner, Department of Vermont Health Access
Senator Claire Ayer, Vermont State Senator
Hunt Blair, Deputy Commissioner, Division of Health Reform and State Health Information
Technology Coordinator, State of Vermont
Richard Boes, Commissioner, CIO Department of Information and Innovation, State of
Vermont
Harry Chen, MD., Commissioner, Vermont Department of Health
Peter Cobb, Director, Vermont Assembly of Home Health Agencies
David Cochran, CEO and President, Vermont Information Technology Leaders
Don Curry, President and General Manager, CIGNA HealthCare of New England
Esther Emard, RN, Chief Operating Officer, NCQA
Patrick Flood, Commissioner, Department of Mental Health, State of Vermont
Don George, President and CEO, Blue Cross Blue Shield of Vermont
Paul Harrington, Executive Director, Vermont Medical Society
Jim Hester, CMS Center for Innovation
Church Hindes, VNA of Chittenden and Grand Isle Counties
Steve Kimbell, Commissioner, BISHCA
Jim Leddy, AARP Vermont State President
William Little, Vice President, Vermont MVP Health Care
Charles MacLean, MD, Professor of Medicine, Research Director AHEC Program & Office
of Primary Care, University of Vermont College of Medicine
Suzanne Santarcangelo, PhD., Director Health Care Operations, Agency of Human Services,
State of Vermont
Richard Slusky, Director of Payment Reform, State of Vermont
Deborah Wachtel, NP, MPH, Vice President, Vermont Nurse Practitioner Association
Bill Warnock, ND, Naturopathic Physician
Nicole Wilson, Assistant Director, State Employee Benefits

2012 meeting schedule available at <http://dvha.vermont.gov/advisory-boards/4microsoft-word-2012-bp-executive-comm.-meeting-schedule.pdf>

Blueprint Expansion Design & Evaluation Committee

Terry Bequette, Department of Vermont Health Access
Pam Biron, Blue Cross Blue Shield of Vermont
Hunt Blair, Department of Vermont Health Access
Kathleen Browne, Department of Vermont Health Access
John Brumsted, MD, Fletcher Allen Health Care
Geera Butala, Blue Cross Blue Shield of Vermont
Kevin Ciechon, CIGNA
Peter Cobb, Vermont Assembly of Home Health Agencies
Kevin Cooney, Northern County Health Care
Don Curry, CIGNA HealthCare of New England
Joyce Dobbertin, MD, Corner Medical
Sharon Fine, MD, Northern Counties Health Care, Danville Health Center
LaRae Francis, Gifford Medical Center
Scott Frey, Blue Cross Blue Shield of Vermont
Andrew Garland, Blue Cross Blue Shield of Vermont
Don George, CEO, Blue Cross Blue Shield of Vermont
Larry Goetschius, Addison County Home Health and Hospice
Paul Harrington, Vermont Medical Society
Ani Hawkinson, ND, Naturopathic Physician
Robert Wheeler, MD, Medical Director, Blue Cross Blue Shield Vermont
Bard Hill, State of Vermont
Laura Hubbell, Central Vermont Hospital
Craig Jones, MD, Blueprint for Health
Pat Jones, Blueprint for Health
Dian Kahn, BISHCA
Patti Launer, Bi-State Primary Care Association
Linda Leu, Blue Cross Blue Shield Vermont
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Vicki Loner, Department of Vermont Health Access
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Lou McLaren, MVP Health Care
Dana Noble, United Health Alliance, Bennington
Judy Peterson, Central Vermont Hospital
Melissa Phillips, University of Vermont
Michael Rapaport, Blue Cross Blue Shield Vermont
Paul Reiss, MD, Independent Physician
Susan Ridzon, Blue Cross Blue Shield Vermont
Laural Ruggles, Northeast Vermont Medical Center
Marietta Scholten, APS Health Care
Neil Sarkar, University of Vermont
Judith Shaw, University of Vermont
Kate Simmons, Bi-State Primary Care Association
Richard Slusky, Health Care Reform, State of Vermont
Kelley Smith, Blue Cross Blue Shield Vermont
Beth Hallock Steckel, Fletcher Allen Health Care

Beth Tanzman, Department of Vermont Health Access

Blueprint Expansion, Design & Evaluation Committee (Continued)

Julie Trottier, Milbank Memorial Fund

Teresa Voci, Gifford Medical Center

Deborah Wachtel, VT Nurse Practitioner Association

Lisa Dulsky Watkins, MD, Blueprint for Health

Jeannette Flynn-Weiss, MVP Healthcare

2012 meeting schedule available at <http://dvha.vermont.gov/advisory-boards/1microsoft-word-bpede-meeting-schedule-2012.pdf>

Blueprint Provider Practice Advisory Group

Charles MacLean, MD, Essex Junction, Co-chair

Lisa Dulsky Watkins, MD, Blueprint for Health, Co-chair

Bradley Berryhill, MD, Rutland

Maureen Boardman, ANRP, Bradford

David Coddair, MD, Morrisville

Joyce Dobbertin, MD, Northern Vermont Regional Hospital

Sharon Fine, MD, Danville

Paul Harrington, Vermont Medical Society

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John King, MD, Milton

Dana Kraus, MD, St. Johnsbury

Keith Michl, MD, Bennington

Robert Penney, MD, Burlington

Josh Plavin, MD, Gifford Medical Center

Frank Provato, MD, Newport

Robert Schwartz, MD, Bennington

Norm Ward, MD, South Burlington

Richard White, MD, Windsor

Anthony Williams, MD, Montpelier

Maja Zimmerman, MD, Middlebury

2012 meeting schedule available at [http://hcr.vermont.gov/blueprint for health](http://hcr.vermont.gov/blueprint%20for%20health)

Blueprint Payment Implementation Work Group

Sherry Bellimer, Mt. Ascutney Hospital & Health Care Center
Pam Biron, Blue Cross Blue Shield Vermont
Kevin Ciechon, CIGNA
Ann Collins, CIGNA
Lori Collins, Department of Vermont Health Access
Marc Comtois, Central Vermont Medical Center
Michele Corey, CIGNA
Wendy Cornwell, Brattleboro Memorial Hospital
Jean Cotner, Porter Medical
Carol Cowan, Blue Cross Blue Shield Vermont
Christine Fortin, North Country Hospital
LaRae Francis, Gifford Medical Center
Scott Frey, Blue Cross Blue Shield Vermont
Laura Hubbell, Central Vermont Medical Center
Penrose Jackson, Fletcher Allen Health Care
Amy James, Blue Cross Blue Shield, Vermont
Craig Jones, MD, Director Vermont Blueprint for Health
Pat Jones, Vermont Blueprint for Health
Renee Kilroy, Northern Counties HealthCare, Inc.
William Little, Vermont MVP Health Care
Jill Lord, Mount Ascutney Hospital and Health Center
James Mauro, Blue Cross Blue Shield Vermont
Elise Mckenna, Morrisville
Lou McLaren, Contracts Manager, MVP Health Care
Sarah Narkewicz, Rutland Regional Medical Center
Dana Noble, United Health Alliance
Chrissie Racicot, HP Enterprise Services
Jack Reilly, Mt. Ascutney Hospital & Health Center
Julie Riffon, North Country Hospital
Jeffrey Ross, Department of Vermont Health Access
Laural Ruggles, North Eastern Regional Hospital
Jenney Samuelson, Blueprint for Health
Richard Slusky, Health Care Reform
Beth Hallock Steckel, Fletcher Allen Health Care
Beth Tanzman, Blueprint for Health
Crystal Thibodeau, Mt. Ascutney Hospital and Health Center
Nancy Thibodeau, Springfield Medical Center
Paul Tracey, North Country Hospital
Lisa Watkins, MD, Blueprint for Health, Department of Vermont Health Access
Jeanette Flynn Weiss, MVP Healthcare
Catherine Wentworth, CIGNA
Robert Wheeler, MD, Blue Cross Blue Shield Vermont

2012 meeting schedule available at <http://dvha.vermont.gov/advisory-boards/payer-implementation-work-group>

4.3 Appendix C – 2011 Presentations and Press Summary

OUT OF STATE MEETINGS

1/7/11	IOM – Roundtable on Value & Science Driven Health Care Value Incentives Learning Collaborative	Washington, DC	C. Jones
1/10/11	IOM Learning Health Care System in America	Washington, DC	C. Jones
1/27/11	Center for Health Care Strategies “Reducing Disparities by Connecting Patients in the Community”	Baltimore, MD	Watkins
2/16/11	ONC Meeting	Washington, DC	C. Jones
2/22/11	Milbank Technical Board Meeting	NY, NY	C. Jones
4/4/11	University of Michigan Health Management and Policy Program	Ann Arbor, MI	Watkins
4/5/11	Main Quality Counts Annual Meeting	Augusta, ME	Watkins
5/5/11	IOM Learning Health Care Systems in America	Irvine, CA	C. Jones
5/12/11	House Ways & Means Subcommittee on Health	Washington, DC	Watkins
6/13/11	2011 US Administration on Aging Health and Dementia Grantee Mtg.	Crystal City, VA	Samuelson
7/7/11	Academy Health – Examining the Key Implementation Issues Regarding Public Reporting on Health Plan QI Strategies Under Affordable Care Act	Washington, DC	C. Jones
7/26/11	IOM – BPIC Team Based Care Initiative Meeting	Washington, DC	C. Jones
8/9/11	IOM Learning Healthcare System in America	Woods Hole, MA	C. Jones
9/12/11	ONC Meeting – HHS/ONC Meeting on Consumer Access for Health Information	Washington, DC	C. Jones
9/21/11	IOM Roundtable Meeting	Washington, DC	C. Jones
9/27/11	NCQA Board of Directors Meeting – Overview of VT Blueprint Model and How Payment Streams are Driving Change	Washington, DC	C. Jones
9/30/11	2011 Hawaii Primary Care Association Annual Meeting Capstone Address on the Blueprint	Honolulu, HI	Tanzman
10/13/11	Women in Government – Healthcare Reform Task Force Meeting	Charleston, SC	Watkins
10/13/11	Putting IT in Transitions Meeting – Hosted by John A. Harford Foundation, the Gordon and Betty Moore Foundation and Kaiser Permanente in Collaboration with ONC	Washington, DC	C. Jones
10/18/11	Milbank Memorial Fund Technical Board Meeting	NY, NY	C. Jones
10/19/11	Milbank memorial Fund Eastern Regional Meeting – Reforming States Group	Boston, MA	C. Jones
10/20/11	NASHP/Foundation for Informed Medical Decision Making Levers for Incorporating Shared Decision making into State Policy?	Washington, DC	Watkins
10/31/11	Multistate Collaborative Meeting	Boston, MA	C. Jones
11/2/11	National Academy for State Health Policy and California’s Community Clinics Initiative	Berkeley, CA	P. Jones
11/8/11	Maine and VT. CHIPRA Quality Demonstration Grant – Improving Health Outcomes for Children Executive Committee Meeting	Whitefield, NH	Watkins
11/16/11	National Association of Health Data Organizations Annual Meeting	Alexandria, VA	P. Jones
11/29/11	ECRI Institute Annual Conference, Co-sponsored with the FDA – Patient Centeredness in Policy and Practice. A Conference on Evidence, Programs, and Implications	Silver Spring, MD	C. Jones

IN STATE MEETINGS

1/6/11	Middlebury Blueprint Kick-Off Meeting	Middlebury, VT	Watkins
3/18/11	Brattleboro Blueprint Kick-Off Meeting	Brattleboro, VT	Watkins
3/29/11	Annual Worksite Wellness Conference Blueprint Presentation	Burlington, VT	C. Jones
3/31/11	VCHIP Statewide Meeting Developmental & Autism Screening in Primary Care	Burlington, VT	Watkins
4/1/11	VNPA Annual Conference	Stowe, VT	C. Jones
4/11/11	Blueprint for Health Annual Meeting	Burlington, VT	Watkins
4/25/11	Health Policy Class Lecture – UVM	Burlington, VT	Watkins
4/28/11	University of Vermont Medical Students – Blueprint Presentation	Burlington, VT	C. Jones
7/18/11	NASHP National Meeting –“From Medical Homes to Neighborhoods: Using Community Health Teams and Networks to Improve Patient Care, A Joint ABCD III Learning Collaborative/Homes to Neighborhood” - Community Health Teams and Networks: The Basics - Financing CHT’s - Making the Case and Spreading Innovations - Developing Organizational Frameworks to Enable Health Teams and Networks to Form a Function - Highly Effective Patient and Family Engagement through Community Health Teams and Networks - Evaluating Health Team, network and Pilot Performance	Burlington, VT	C. Jones C. Jones Watkins Watkins Samuelson Watkins
9/8/11	Newport Area/ North Country Hospital Annual Meeting/BP Kickoff	Newport, VT	Watkins
9/26/11	Little Rivers Health Care Annual meeting and Blueprint Kick-off	Bradford, VT	Watkins
10/4/11	Vermont Medical Group Managers Association Annual Meeting	Middlebury, VT	P. Jones
11/15/11	Center for Health Care Strategies, Inc. Integrating Physical and Behavioral Health: An Exploration of State Options	Remote Presentation	Tanzman
12/15/11	Washington County Roundtable	Remote Presentation	Watkins

2011 PRESS RELEASES

3/2011	Vermont’s Blueprint for Medical Homes, Community Health Teams, and Better health at Lower Cost Doi: 10.1377/hithaff.2011.0169. Health Aff march 2011 vol.30 no. 3 383-386
8/1/2011	New England Journal of Medicine 365:7 August 18, 2011 Single Payer Ahead – Cost Control and Evolving Vermont Model

2011 AWARDS

4/28/11	Covisint and Vermont Blueprint for Health together were named “Innovation Award” winners by Microsoft Health user Group at the Microsoft Connected Health Conference. Winning entries were based on three innovation metrics: - technology representing a breakthrough from the industry’s historical approaches - going beyond incremental improvements of existing technology; - measureable improvement of significant business and/or clinical processes positively impacting care
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5. ATTACHMENTS

5.1- Blueprint Evaluation. A Four-Year Overview Based on Two-Year Cohorts with Matched Controls (VHCURES Commercial Population, Ages 18-64)



ONPOINT
Health Data

Report

Blueprint Evaluation

**A Four-Year Overview Based on Two-Year Cohorts
with Matched Controls (VHCURES Commercial Population,
Ages 18-64)**

This document was prepared by Onpoint Health Data
January 2012

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EXECUTIVE SUMMARY

Using Vermont Healthcare Claims Uniform Reporting and Evaluation System (VHCURES) eligibility and claims data for the commercially insured population, ages 18–64, members were attributed to Blueprint participating practices and matched to a comparison control group for 2007–2010. This study evaluates the five St. Johnsbury and two Burlington area Blueprint pilot practices. Statewide trends for members, ages 18–64, enrolled with the same commercial payers (i.e., Blue Cross Blue Shield of Vermont, CIGNA, MVP, and The Vermont Health Plan) also were evaluated for comparison.

A two-year cohort methodology — i.e., 2007–2008 (Baseline), 2008–2009 (Start-up), and 2009–2010 (Operations) — was employed due to difficulty in tracking a large sample of the same participant members over a full four-year period of time. The sequence of three two-year block analyses was used in order to include the largest number of patients who were active in a primary care setting during each of the time periods. This approach accommodates the variability in the populations that participate in healthcare from year to year. Stated more simply, patients who are active in one two-year period may not be active in another, and the active medical home patient population changes from year to year. Evaluation in two-year increments provides a look at trends that occur in the larger overall population instead of among a smaller subpopulation that may have measurable activity in all four years. Although each two-year analysis is distinct, the consecutive sequence of the three analyses provides a view of trends in the pilot communities, for important measures, over a time period ranging from January 2007 through December 2010. All measures were capped at the 99th percentile to control for extreme outlier cases. The following bullets provide a cumulative snapshot of select expenditure and utilization trends from 2007 through 2010:

EXPENDITURE TRENDS

- **Overall Expenditures** — Annual expenditures per capita for Blueprint participants increased 22% (from \$4,458 to \$5,444) — a lower rate than the 25% increase for controls (from \$4,136 to \$5,186). Over the same period, the statewide average also increased 22% (from \$3,582 to \$4,387).
- **Inpatient Expenditures** — Annual inpatient expenditures per capita for Blueprint participants increased 41% (from \$500 to \$707) — a lower rate than the 50% increase for controls (from \$470 to \$702). Over the same period, the statewide average increased 40% (from \$496 to \$696).
- **Outpatient Hospital Expenditures** — Annual per capita expenditures for Blueprint participants increased 32% (from \$1,524 to \$2,016) — a lower rate than the 39% increase for controls (from \$1,395 to \$1,944). Over the same period, the statewide average increased 32% (from \$1,245 to \$1,641). Annual outpatient hospital expenditures are the largest component and a significant driver of healthcare cost and trend for the commercial population.
- **Outpatient Emergency Department Expenditures** — Annual outpatient emergency department (ED) expenditures per capita for Blueprint participants increased 50% (from \$115 to \$172) — a lower rate than the 56% increase for controls (from \$119 to \$185). Over the same period, the statewide average increased 41% (from \$129 to \$181).

CHRONIC CONDITIONS EXPENDITURE TRENDS

- **Establishing a Baseline** — An additional analysis was conducted of the per capita expenditures for members identified through the claims data with any of the Blueprint-targeted chronic conditions (i.e., asthma, chronic obstructive pulmonary disease [COPD], congestive heart failure, coronary heart

disease, diabetes, depression, and hypertension). At baseline (2007), participants with at least one of these chronic conditions incurred 2.4 times the expenditures per capita compared to participants without a selected chronic condition.

- **Chronic Condition Expenditures** — Per capita annual expenditures for Blueprint participants with at least one of these chronic conditions increased 21% (from \$7,315 to \$8,851) — a lower rate than the 29% increase for controls (from \$6,735 to \$8,706). Over the same period, the statewide average increased 26% (from \$7,294 to \$9,198).

UTILIZATION TRENDS (INPATIENT STAYS & OUTPATIENT EMERGENCY DEPARTMENT VISITS)

- **Inpatient Stays** — The annual rate of inpatient stays for Blueprint participants decreased by 6% (from 43.4 visits per 1,000 members in 2007 to 40.8 in 2010) — a higher rate than the less than 1% decrease for controls (from 42.5 to 42.3). Over the same period, the statewide average increased 6% (from 42.9 to 45.6).
- **Outpatient Emergency Department Visits** — The annual rate of outpatient ED visits for Blueprint participants decreased by less than 1% (from 161.8 per 1,000 members in 2007 to 160.7 in 2010), while the rate for controls increased 10% (from 154.9 to 170.9). Over the same period, the statewide average increased by 2% (from 175.6 to 178.8).

These findings are encouraging and suggestive of a reduction in the rate of increase in both expenditures and utilization for Blueprint participants relative to controls and the statewide average. The relative cost of healthcare for patients with targeted chronic conditions compared to patients without those conditions underscores the ongoing need for prevention and care management activities at the practice and community levels.

The results reported in this study should be interpreted with caution for the following reasons:

- The participant population in the pilot communities was relatively small, and the results for each measure were highly variable in the participant and control populations at any time point. While the trends are informative, the differences between the participant and control populations were generally not statistically significant due to the size of the study populations and the variable results in each population.
- Directional trends frequently shifted from one two-year period to the next — a tendency that is typical of claims-based analysis, particularly in smaller populations. This makes it difficult to come to firm conclusions until larger populations are studied over a longer time period.
- The overall statewide trends for healthcare expenditures are encouraging and may reflect important societal changes. These overarching trends may obscure the impact that is detectable due to any specific intervention.
- The results presented in this report are based on aggregation of data for participant and control populations in both pilot communities. Results vary by community. Detail on regional variation will be included in a more complete report as the analysis is completed.
- The impacts of the Blueprint model are most likely to be seen in the 2009–2010 time period. The pilot in St. Johnsbury started July 1, 2008, and the pilot in Burlington started October 1, 2008. For

the purposes of this study, 2007 should be considered a baseline year and 2008 should be considered a start-up year. Note that 2009 and 2010 were the first years in which the pilots were more fully operational.

- Blueprint activities include community-level meetings and planning groups, which may have a spillover effect on nearby practice patterns. Planning and implementation for expansion of the Blueprint was taking place in these areas during the 2009–2010 study period. It is possible that results for the control populations were influenced by nearby Blueprint activities.
- This analysis focused on the commercial population, which typically is healthier than the Medicaid and Medicare populations. Inclusion of the Medicaid and Medicare populations, for which claims data are not yet available in VHCURES, may significantly alter the results.

The following sections of this report provide more detail on the data sources and methods used for this analysis along with specific results for selected categories of healthcare expenditures, including certain chronic conditions.

DATA SOURCES & METHODS

This Blueprint evaluation employed data supplied to the Vermont Healthcare Claims Uniform Reporting and Evaluation System (VHCURES) for 2007–2010 dates of service. The VHCURES data include commercial (major medical) eligibility, medical claims, and pharmacy claims for Vermont residents. Vermont Medicaid claims historically have not been a part of the VHCURES data set, but are currently in the process of being submitted and added. Medicare claims data similarly have been unavailable, but efforts also are under way to acquire and integrate Medicare data into the VHCURES data set for future analyses.

This evaluation included commercial eligibility and claims data for the payers participating in the Blueprint program: Blue Cross Blue Shield (BCBS) of Vermont, CIGNA, MVP, and The Vermont Health Plan. Data from other payers were not included to avoid any bias in selection of comparative controls due to payer or product reimbursement or program differences.

Members aged 18–64 years were used in this evaluation. Members age 65 and older were not included to ensure that incomplete claims data due to Medicare coverage would not bias the results. Members younger than 18 years also were not included in this evaluation due to the low volume of participating children and the potential for evaluation bias. While 19 percent of the statewide commercial population in VHCURES were between the ages of 0 and 17, members in the Blueprint practices were comprised of significantly fewer children: 6% in St. Johnsbury practices and <1% in Burlington practices. Pediatric practices (i.e., St. Johnsbury Pediatrics and Hagan Rinehart & Connolly in Burlington) did not begin participation in Blueprint until 2011.

Attribution of Members to Blueprint Practices

An early evaluation of Blueprint using VHCURES suggested that there were some limitations to the Blueprint flagging submitted by payers to VHCURES. For this evaluation, the Blueprint program elected to have Onpoint attribute members to participating Blueprint practices using VHCURES claims data rather than rely on the payer-supplied flagging. Onpoint used Blueprint practice physician rosters and standard evaluation and management (E&M) coding used by CMS with a 24-month look-back to assign members to Blueprint practices over the four-year period of 2007–2010. Onpoint used a standard method of assigning a member to the practice, with the plurality of visits holding dominance and with ties attributed to the most recent visit. This approach had several advantages over the flagging provided by payers in VHCURES, including:

- Allowed for a consistent attribution methodology across all payers
- Ensured that each member had at least one visit with the practice
- Allowed for practice-specific reporting to validate results
- Allowed for evaluation based on where a member received care instead of the location of their residence (e.g., a resident of the Barre hospital service area [HSA] who received primary care in Burlington would be assigned correctly to the latter location)

While all practices were included in the attribution by Onpoint regardless of start-up date, this evaluation is based on the initial pilot practices listed in [Table 1](#).

Table 1. Blueprint Practices by Evaluation Group

PRACTICE	EVALUATION GROUP	START-UP DATE
Caledonia Internal Medicine	St. Johnsbury	07/01/2008
Concord Health Center	St. Johnsbury	07/01/2008
Corner Medical	St. Johnsbury	07/01/2008
Danville Health Center	St. Johnsbury	07/01/2008
St. Johnsbury Family Health	St. Johnsbury	07/01/2008
Aesculapius Medical Center	Burlington	10/01/2008
Eugene Moore	Burlington	10/01/2008

Two-Year Study Cohorts

The evaluation design was a cohort study to track changes in utilization and cost for Blueprint participants and a control group over the four-year period (2007–2010). Initial review of the data indicated a significant drop in sample size due to limitations in encrypted member IDs, reducing the ability to track the same person over the evaluation’s four-year period. Using a series of three sequential two-year cohorts significantly increased the sample size (see [Table 2](#)).

The impacts of the Blueprint model are most likely to be seen in the 2009–2010 time period. The pilot in St. Johnsbury started July 1, 2008, and the pilot in Burlington started October 1, 2008. For the purposes of this study, 2007 should be considered a baseline year and 2008 should be considered a start-up year. Note that 2009 and 2010 were the first years in which the pilots were more fully operational.

Table 2. Count of Members Attributed to Blueprint Practices by Two-Year Cohort

POPULATION	2007–2008 (BASELINE)	2008–2009 (START-UP)	2009–2010 (OPERATIONS)
Burlington			
Total	4,409	4,453	4,418
At least one chronic condition *	1,258	1,466	1,403
St. Johnsbury			
Total	3,033	3,226	3,653
At least one chronic condition *	1,141	1,346	1,513
Combined			
Total	7,442	7,679	8,071
At least one chronic condition *	2,399	2,812	2,916

* “At least one chronic condition” includes Blueprint-targeted conditions: asthma, chronic obstructive pulmonary disease, congestive heart failure, coronary heart disease, diabetes, depression, and hypertension

Matched Controls

The method of determining matched control comparison groups was virtually identical to the method used in the previous preliminary evaluation of Blueprint. Propensity score matching algorithms were utilized,

matching participants to controls on age, gender, health status (via 3M™ clinical risk groups), prior year payments, and the occurrence of any of the Blueprint-targeted chronic conditions. Controls also were limited to members residing in the same geographic area (i.e., for Burlington, only Burlington HSA residents). Note that for St. Johnsbury HSA, the control population pool was expanded to include Newport HSA and Morrisville HSA to ensure sufficient sample size.

Controls also were required to have a primary care physician determined using the same attribution methods (i.e., E&M codes with a 24-month look-back). Due to limitations in potential sample size, controls in St. Johnsbury and Burlington also could be selected from practices that began participating in Blueprint after 2010.

Table 3 provides an example of baseline matching results for the 2007–2008 cohort. For St. Johnsbury and Burlington, Blueprint participants were significantly older and more likely to have chronic conditions when compared to the potential control population. After propensity score matching, the participants and controls were statistically similar. Results reported in Table 3 also indicate that the St. Johnsbury Blueprint participants were older and more likely to have targeted chronic conditions when compared to the Burlington participants. Similar baseline matching was done for each of the three two-year time blocks (data not shown). In each case, the Blueprint participant population was older and more likely to have chronic conditions when compared to the general population.

Table 3. Two-Year Cohort Control Matching Results at Baseline (2007)

POPULATION	PARTICIPANTS	POTENTIAL CONTROLS	MATCHED CONTROLS
Burlington			
Total	4,409	32,076	4,409
Older adults (ages 50–64 years)	45%	37%	45%
Male	46%	46%	46%
At least one chronic condition	29%	26%	29%
Not healthy (clinical risk groups)	50%	47%	50%
Expenditures >\$10,000	10%	8%	10%
St. Johnsbury			
Total	3,033	6,016	3,033
Older adults (ages 50–64 years)	48%	43%	49%
Male	42%	45%	42%
At least one chronic condition	38%	34%	38%
Not healthy (clinical risk groups)	57%	48%	55%
Expenditures >\$10,000	11%	10%	10%

Measures

For the two-year cohorts, Onpoint prepared eight expenditure measures, 16 utilization measures, and three HEDIS comprehensive diabetes measures. Key measures are reported here for the purposes of the Blueprint Annual Report. These include total expenditures, inpatient utilization and expenditures, and outpatient

emergency department utilization and expenditures. Analyses are under way to produce a more complete report that includes all measures and regional variation.

In addition to reporting for Blueprint participants and matched controls, Onpoint provided statewide total trends using the same subset of payers participating in Blueprint to avoid payer bias. Additionally, all utilization and expenditure measures were capped at the 99th percentile to assist in reducing the impact of extreme outlier cases.

RESULTS

Expenditure Trends (Two-Year Cohorts)

- **Overall Expenditures** — At baseline (2007), the 7,442 Blueprint participants in the St. Johnsbury and Burlington practices incurred \$31.6 million in expenditures after capping outliers at the 99th percentile. From 2007 to 2010, annual expenditures per capita for Blueprint participants increased 22% (from \$4,458 to \$5,444) — a lower rate than the 25% increase for controls (from \$4,136 to \$5,186). Over the same period, the statewide average increased 22% (from \$3,582 to \$4,387).

Within the two-year cohorts, the increase for participants was highest between 2007–2008 (+14%); increases were lower between 2008–2009 (+5%) and 2009–2010 (+3%). For further detail, see [Figure 1](#) and [Figure 2](#).

- **Inpatient Expenditures** — At baseline, Blueprint participants incurred \$3.6 million in inpatient expenditures after capping outliers. From 2007 to 2010, annual inpatient expenditures per capita for Blueprint participants increased 41% (from \$500 to \$707) — a lower rate than the 50% increase for controls (from \$470 to \$702). Over the same period, the statewide average increased 40% (from \$496 to \$696). (Note that despite capping outliers at the 99th percentile, rates of inpatient expenditure can fluctuate significantly due to small numbers and variability.)

Within the two-year cohorts, the increase for participants was highest between 2008–2009 (+38%); there was also a preceding increase between 2007–2008 (+12%), while 2009–2010 saw a slight decrease (-2%). For further detail, see [Figure 3](#) and [Figure 4](#).

- **Outpatient Hospital Expenditures** — At baseline, Blueprint participants incurred \$10.8 million in outpatient hospital expenditures. From 2007 to 2010, annual per capita expenditures for Blueprint participants increased 32% (from \$1,524 to \$2,016) — a lower rate than the 39% increase for controls (from \$1,395 to \$1,944). Over the same period, the statewide average increased 32% (from \$1,245 to \$1,641). Annual outpatient hospital expenditures are the largest component and a significant driver of healthcare cost and trend for the commercial population.

Within the two-year cohorts, the increase for participants was highest between 2007–2008 (+21%); increases were lower between 2008–2009 (+3%) and 2009–2010 (+3%). For further detail, see [Figure 5](#) and [Figure 6](#).

- **Outpatient Emergency Department Expenditures** — At baseline, Blueprint participants incurred nearly \$815,000 in outpatient hospital emergency department (ED) expenditures. From 2007 to 2010, annual outpatient ED expenditures per capita for Blueprint participants increased 50% (from \$115 to \$172) — a lower rate than the 56% increase for controls (from \$119 to \$185). Over the same period, the statewide average increased 41% (from \$129 to \$181).

Within the two-year cohorts, the increase for participants was highest between 2007–2008 (+32%); increases were lower between 2008–2009 (less than 1%) and 2009–2010 (+3%). For further detail, see [Figure 7](#) and [Figure 8](#).

Figure 1. Change in Total Healthcare Expenditures Per Capita

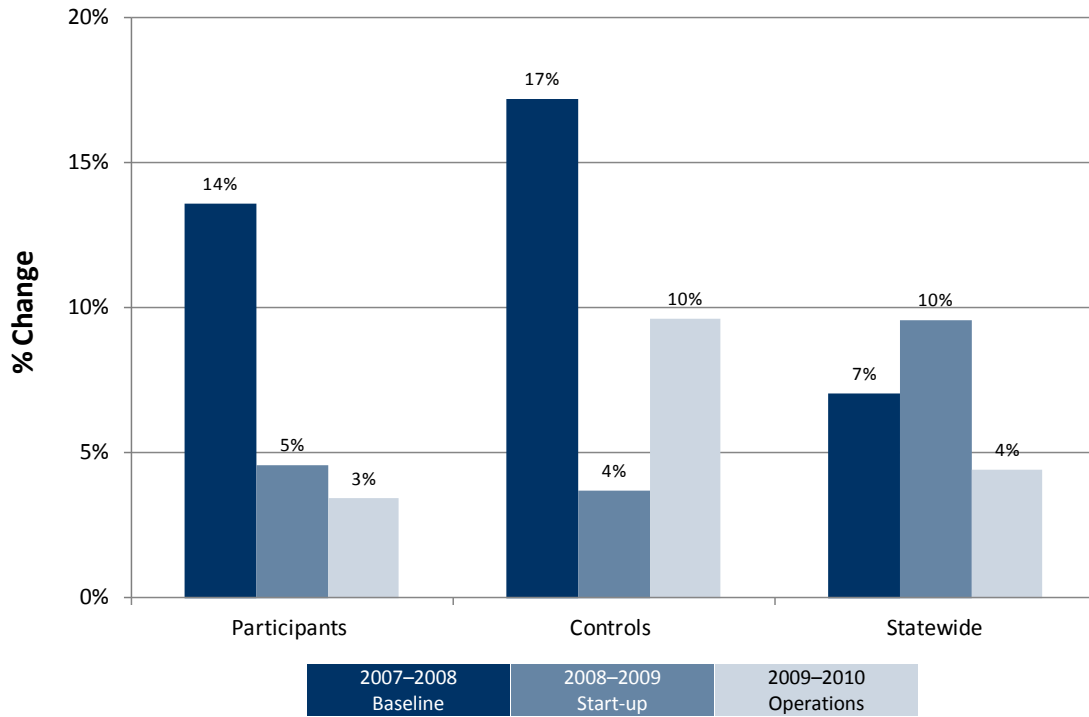


Figure 2. Total Healthcare Expenditures Per Capita

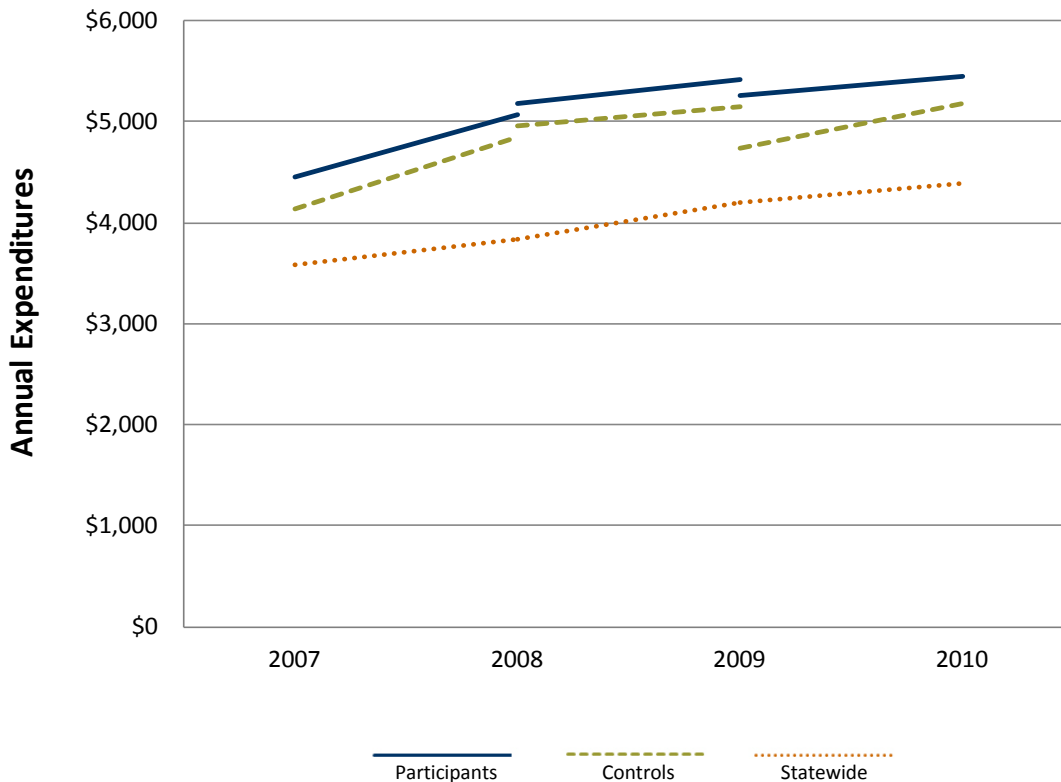


Figure 3. Change in Total Inpatient Expenditures per Capita

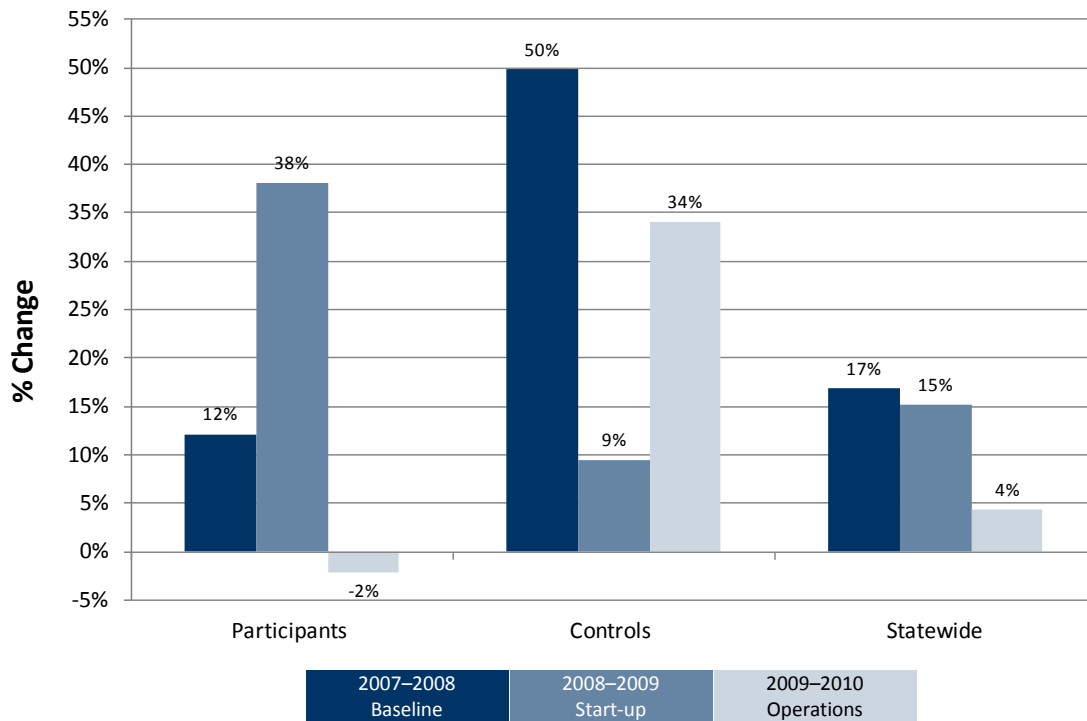


Figure 4. Total Inpatient Expenditures per Capita

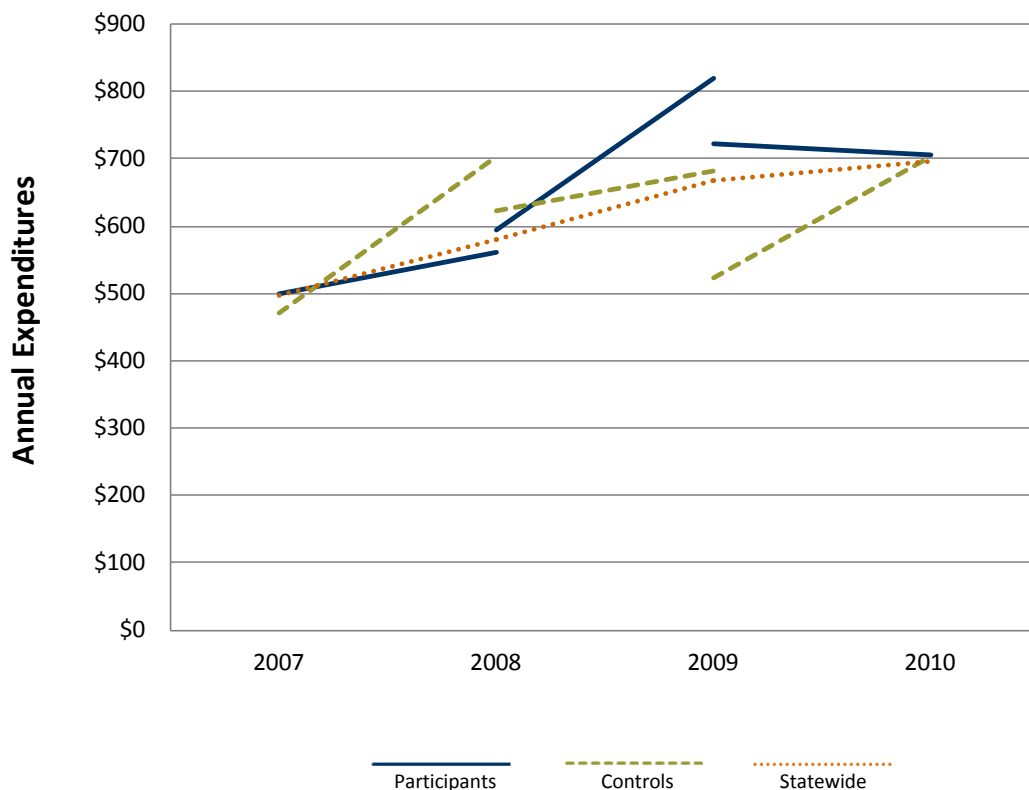


Figure 5. Change in Total Outpatient Hospital Expenditures per Capita

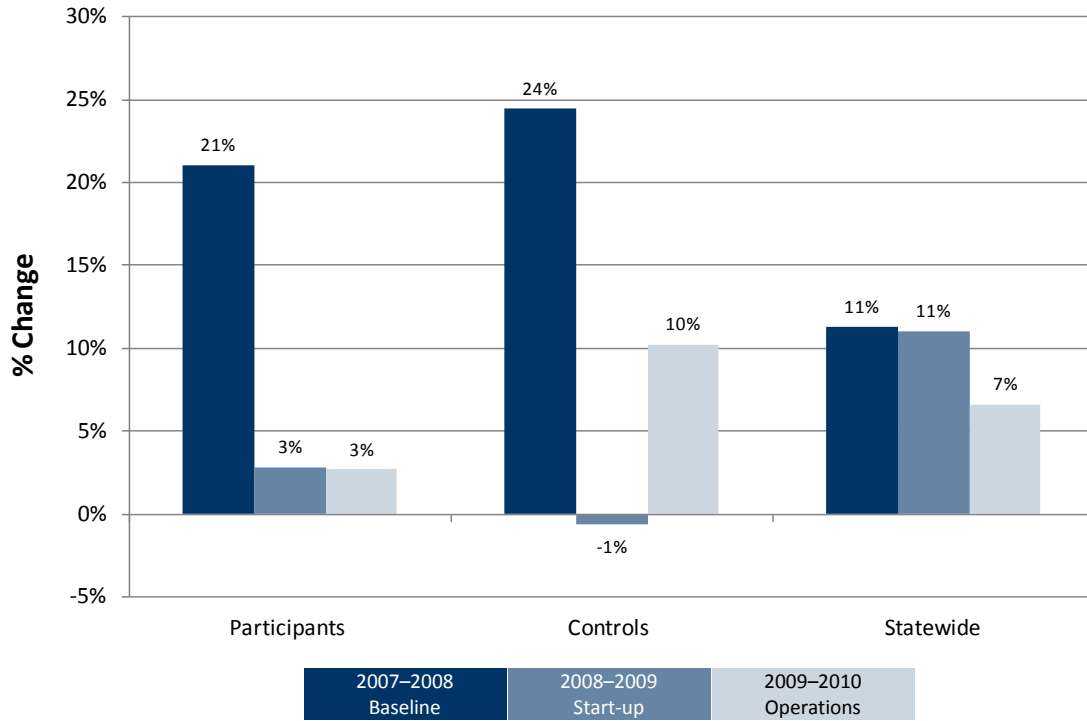


Figure 6. Total Outpatient Hospital Expenditures per Capita

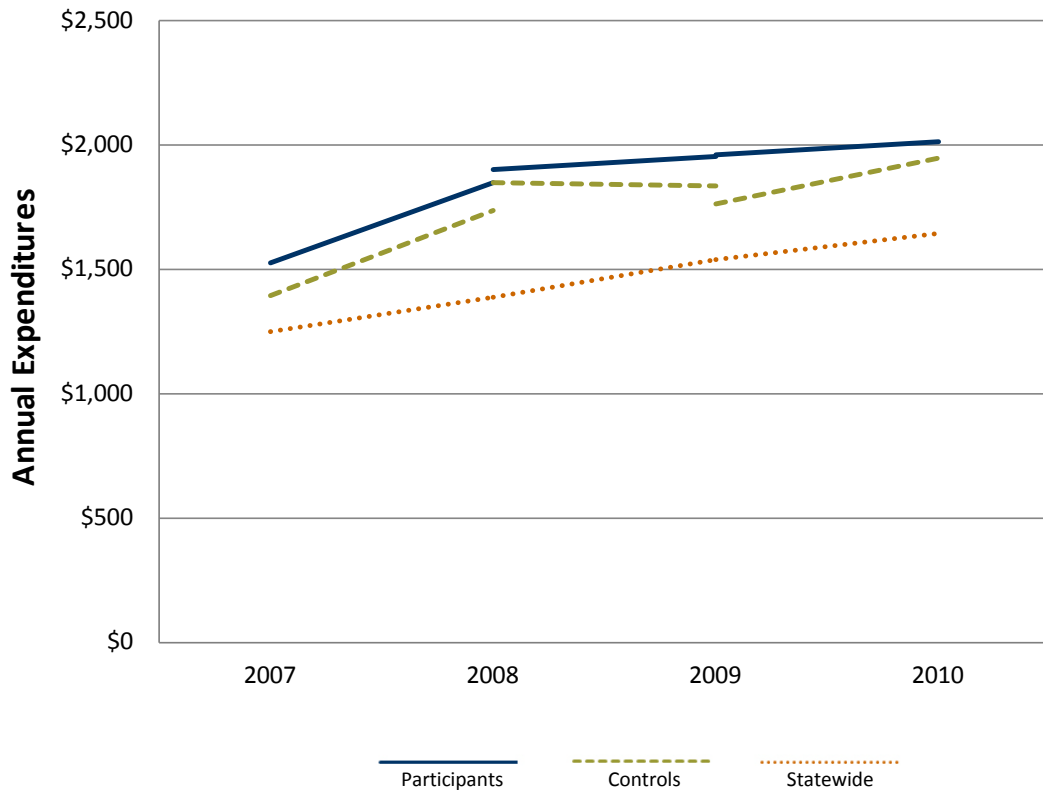


Figure 7. Change in Total Outpatient ED Expenditures per Capita

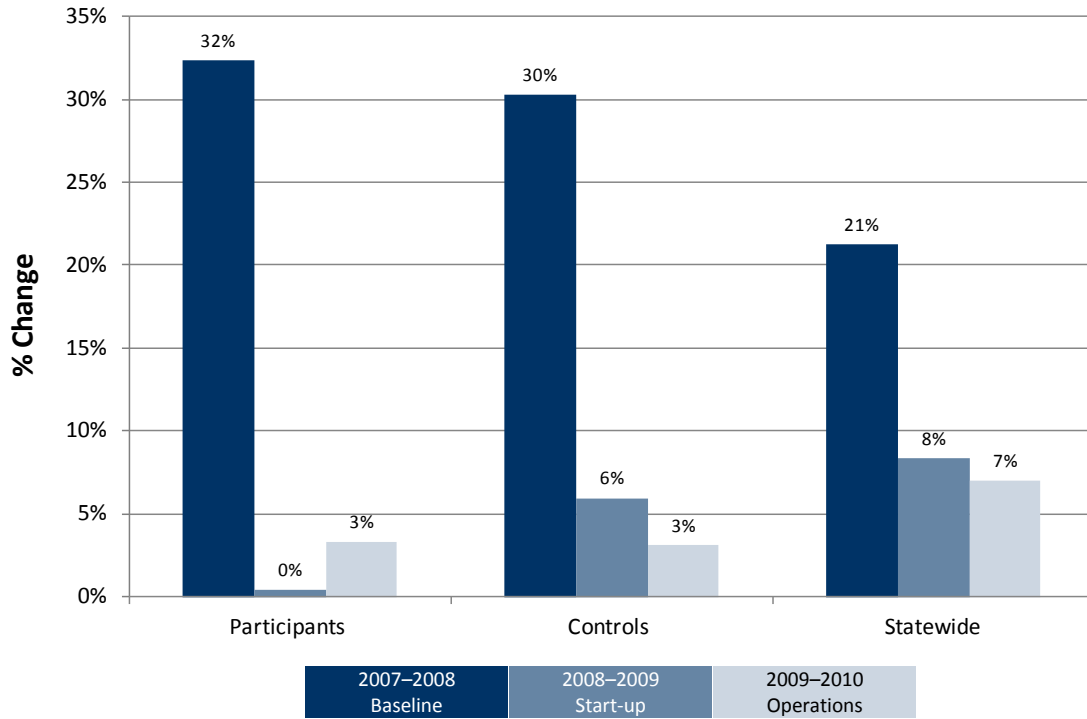
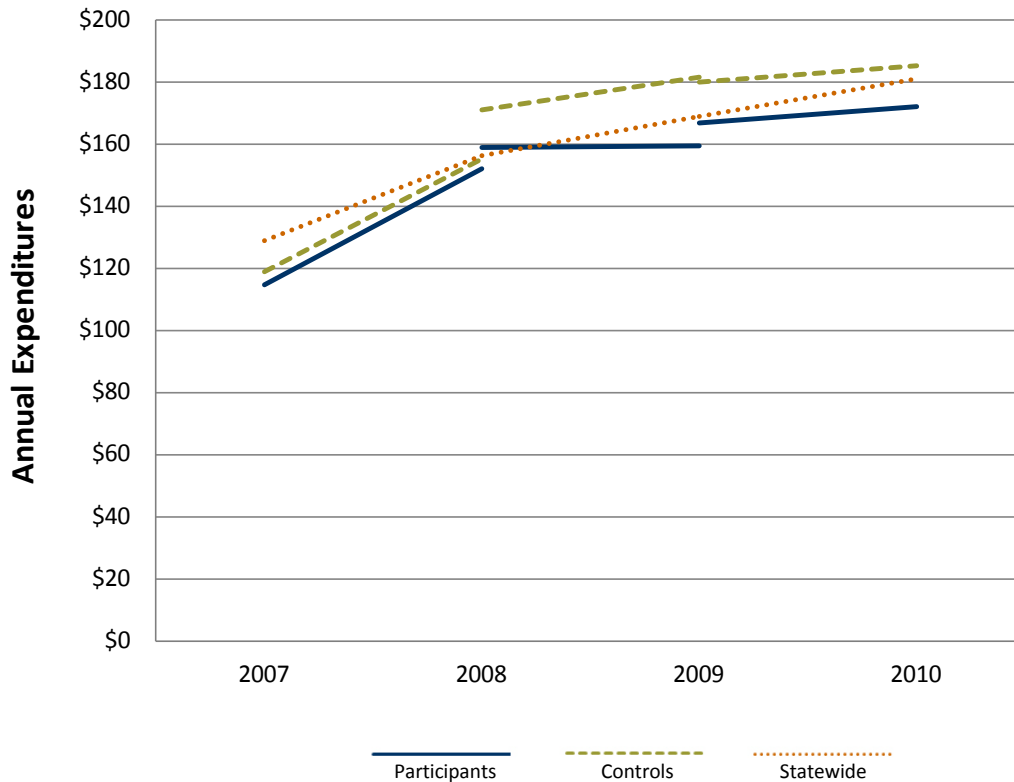


Figure 8. Total Outpatient ED Expenditures per Capita



Chronic Condition Expenditure Trends (Two-Year Cohorts)

An additional analysis was conducted of the per capita expenditures for members identified through the claims data with at least one of the following prevalent chronic conditions; asthma, chronic obstructive pulmonary disease [COPD], congestive heart failure, coronary heart disease, diabetes, depression, and hypertension.

At baseline (2007), there were 2,399 Blueprint participants with at least one of the selected chronic conditions. These members incurred \$17.2 million in expenditures after capping outliers. With \$7,315 in annual expenditures per capita, these participants incurred 2.4 times the expenditures per capita compared to participants without a selected chronic condition (\$3,046). This figure increased to 3.6 times for members with two or more chronic conditions, who incurred \$10,875 in annual expenditures per capita at baseline.

The 419 participants identified in the claims data with diabetes, incurred \$9,278 in annual expenses — 3.0 times the expenditures per capita compared to participants without a selected chronic condition. The 35 participants with congestive heart failure incurred \$19,559 in annual expenses, yielding the highest relative difference — 6.4 times the expenditure per capita for participants without a selected chronic condition. For further detail, see [Table 4](#).

Table 4. Chronic Conditions and Comparative Expenses at Baseline

POPULATION CHARACTERISTIC	2007 PARTICIPANTS	2007 PER CAPITA EXPENDITURE RATE	2007 EXPENDITURE RATE COMPARED TO MEMBERS WITHOUT A SELECTED CHRONIC CONDITION
None of the Blueprint selected conditions	5,043	\$3,046	1.0
At least one of the selected chronic conditions	2,399	\$7,315	2.4
Two or more of the select chronic conditions	671	\$10,875	3.6
Individual chronic condition			
Asthma	338	\$8,561	2.8
COPD	76	\$9,915	3.3
Congestive heart failure	35	\$19,559	6.4
Coronary heart disease	212	\$13,419	4.4
Depression	800	\$8,240	2.7
Diabetes	419	\$9,278	3.0
Hypertension	1,350	\$7,396	2.4

* Note that individual chronic conditions will not add to “At least one of the selected chronic conditions” since members may have multiple chronic conditions.

From 2007 to 2010, per capita annual expenditures for Blueprint participants with at least one of these chronic conditions increased 21% (from \$7,315 to \$8,851) — a lower rate than the 29% increase for controls (from \$6,735 to \$8,706). Over the same period, the statewide average increased 26% (from \$7,294 to \$9,198). For further detail, see [Figure 9](#) and [Figure 10](#).

Figure 9. Change in Total Healthcare Expenditures per Capita for Members with Chronic Condition

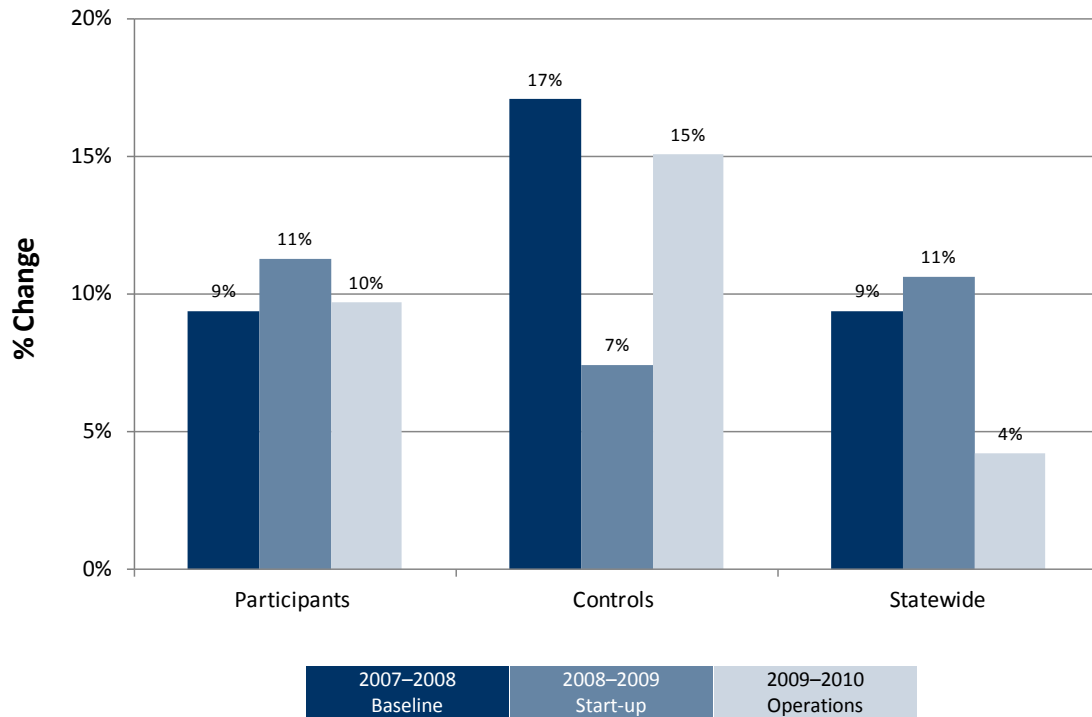
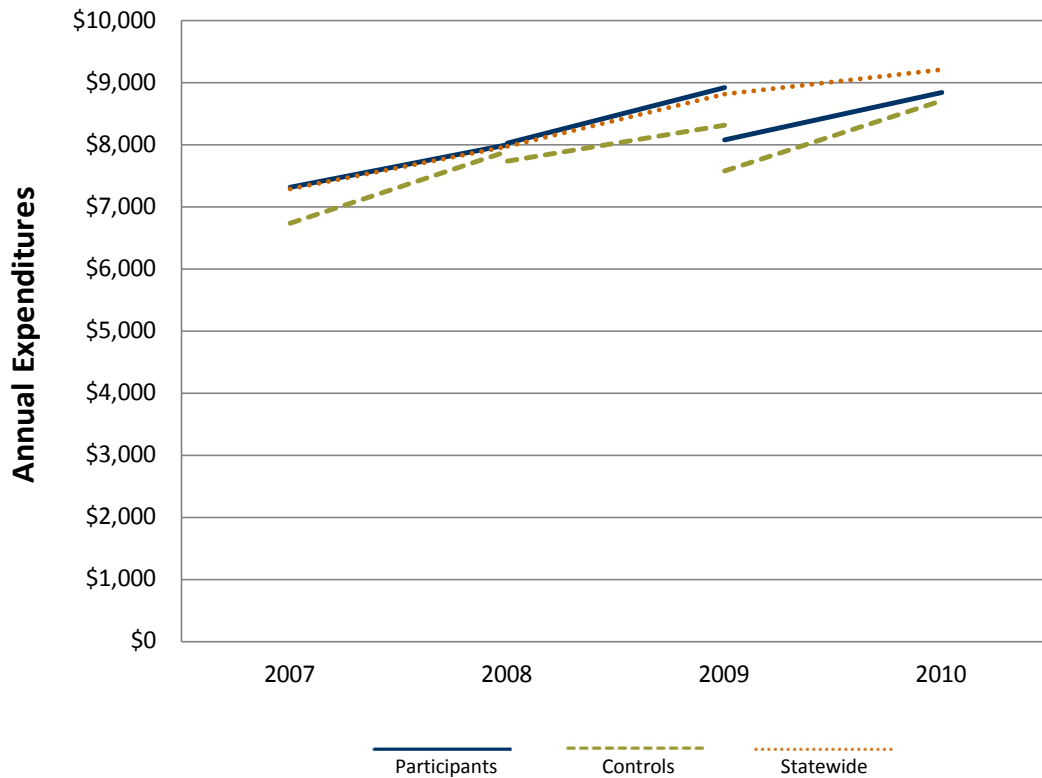


Figure 10. Total Healthcare Expenditures per Capita for Members with Chronic Condition



Utilization Trends (Inpatient Stays & Outpatient ED Visits) (Two-Year Cohorts)

- **Inpatient Stays** — At baseline, the 7,442 Blueprint participants in St. Johnsbury and Burlington practices incurred 308 inpatient stays after capping outliers at the 99th percentile. The annual rate of inpatient stays for Blueprint participants decreased by 6% (from 43.4 visits per 1,000 members in 2007 to 40.8 in 2010) — a higher rate than the less than 1% decrease for controls (from 42.5 to 42.3). Over the same period, the statewide average increased 6% (from 42.9 to 45.6).

Within the two-year cohorts, the inpatient stays trend for participants increased 9% between 2007–2008, then decreased between both 2008–2009 (-1%) and 2009–2010 (-12%). Due to small numbers, rates of inpatient stays can vary significantly between years. For further detail, see [Figure 11](#) and [Figure 12](#).

- **Outpatient Emergency Department Visits** — At baseline, Blueprint participants in the St. Johnsbury and Burlington practices incurred 1,148 outpatient ED visits after capping outliers. The annual rate of outpatient ED visits for Blueprint participants decreased by less than 1% (from 161.8 per 1,000 members in 2007 to 160.7 in 2010), while the rate for controls increased 10% (from 154.9 to 170.9). Over the same period, the statewide average increased by 2% (from 175.6 to 178.8).

Within the two-year cohorts, the outpatient ED visits trend for participants increased 15% between 2007–2008, then decreased between both 2008–2009 (-11%) and 2009–2010 (-9%). For further detail, see [Figure 13](#) and [Figure 14](#).

Figure 11. Change in Annual Rate of Inpatient Stays per 1,000 Members

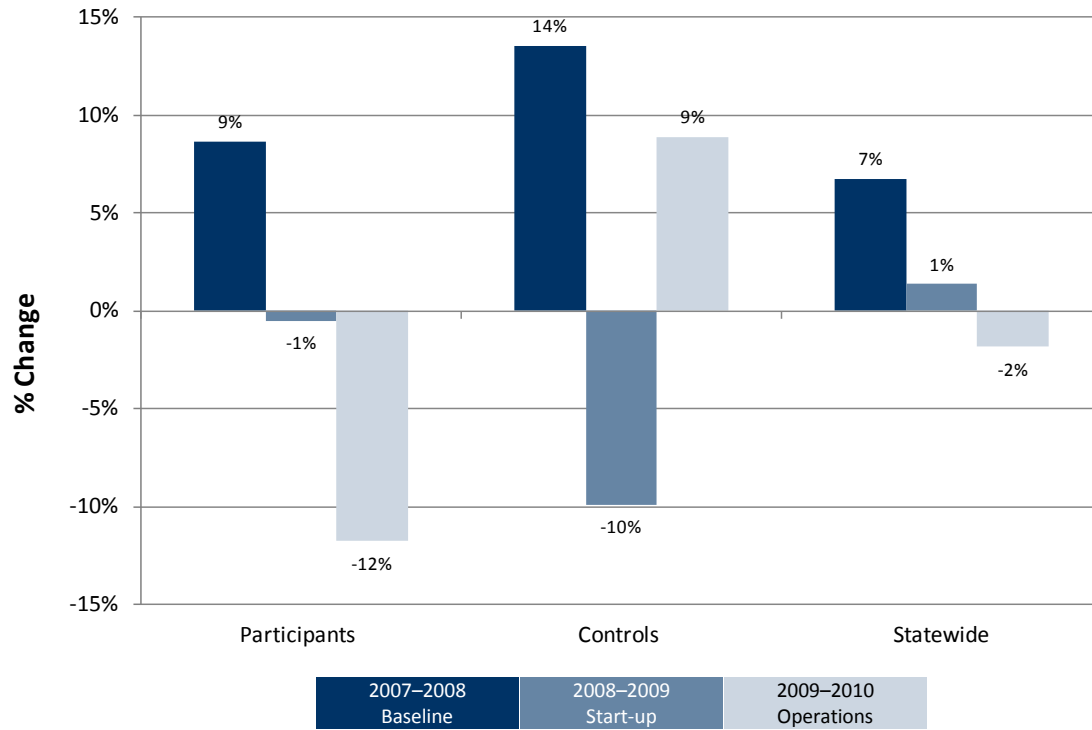


Figure 12. Annual Rate of Inpatient Stays per 1,000 Members

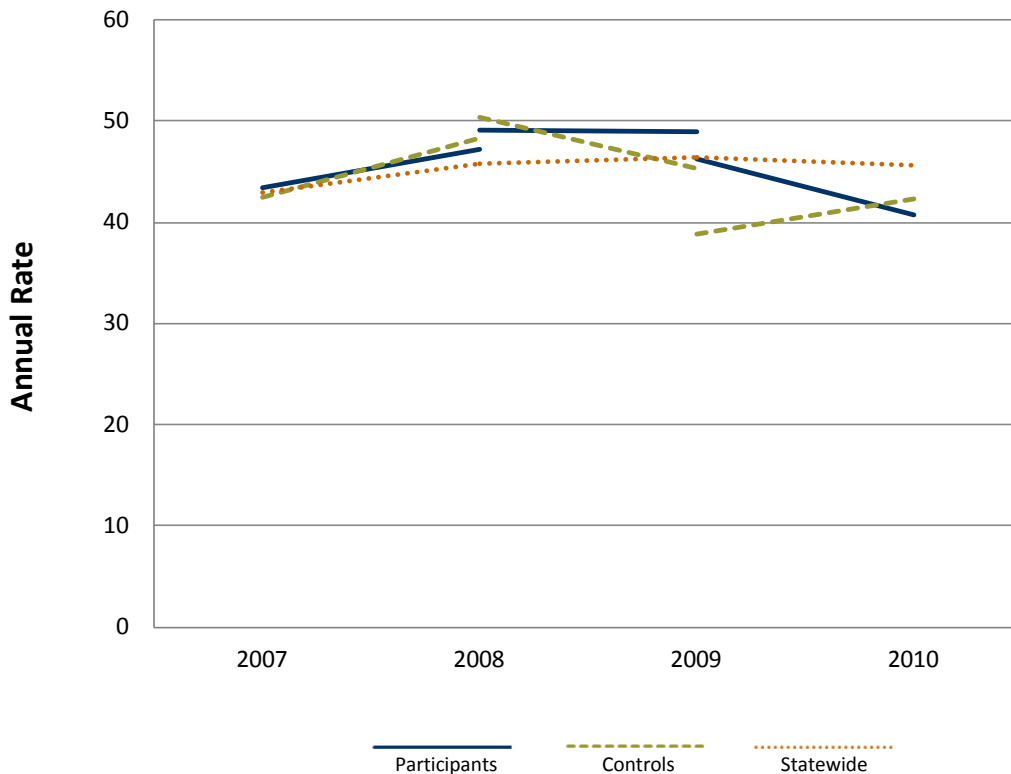


Figure 13. Change in Annual Rate of Outpatient ED Visits per 1,000 Members

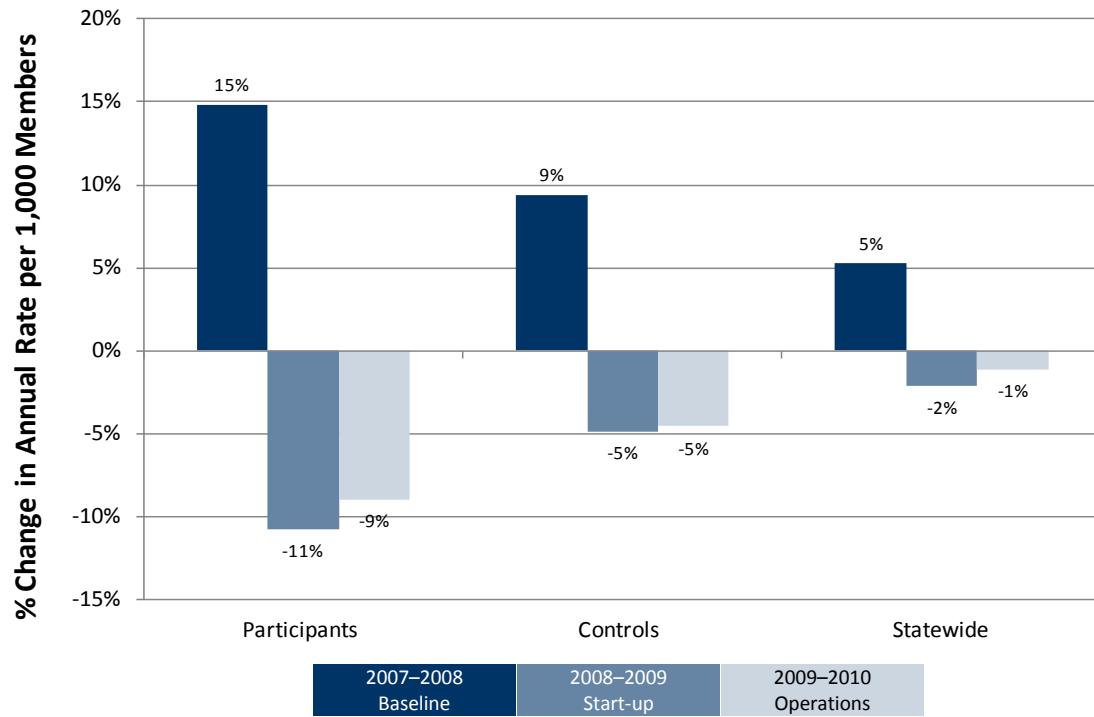
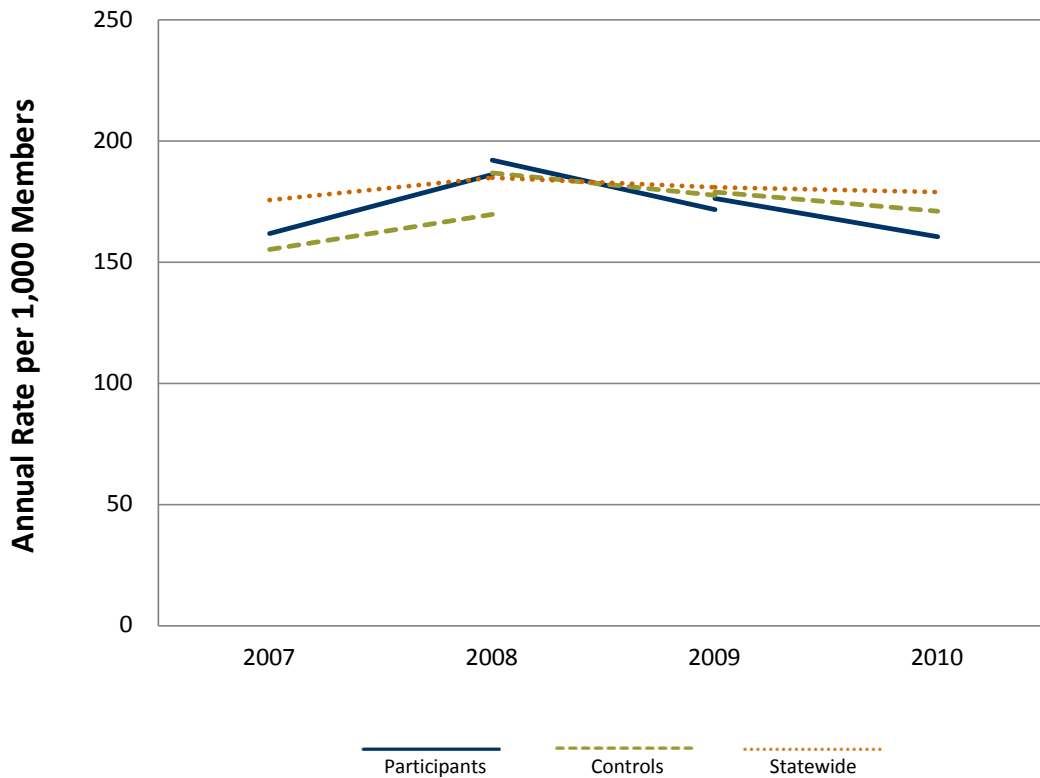


Figure 14. Annual Rate of Outpatient ED Visits per 1,000 Members



CONCLUSION

This report provides an early assessment of Blueprint results by focusing primarily on participants in the earliest pilot markets (St. Johnsbury and Burlington) as compared to matched control populations in those same markets and statewide trends for the commercially insured population. Two-year matched cohorts were used to augment the pool of data available for analysis.

Preliminary trends suggest that the Blueprint in general is having a positive impact on overall expenditure growth as compared to controls with similar demographics and health risks. These results suggest that the growth curve is slowing or “bending” for a number of important expenditure and utilization measures. This pattern was observed statewide for Blueprint participants and for controls. From 2007 through 2010, Blueprint participants demonstrated a similar or higher rate of slowing than the statewide population even though they tended to be older, more likely to have chronic conditions, and had higher expenditures at baseline. The matched control population demonstrated similar trends, although the gains among a number of measures were not as high or consistent as for participants. During the 2009–2010 period, when Blueprint operations were most mature in the pilot communities, the degree of improvement in the participant population tended to be greater than in the control population for most measures.

Although these early trends are encouraging, it is important to restate that the noted differences between participant and control populations were not likely to be statistically significant due to sample size and variability. It also may be difficult to detect the impact of a specific intervention on a small population when overarching statewide changes are influencing trends. In addition, it should be emphasized that this analysis was focused strictly on the commercial population, which is typically healthier than the Medicaid and Medicare populations. The ability to detect differences, if they are present, will be enhanced with a larger sample size and, in particular, with the inclusion of Medicaid and Medicare data. A more detailed analysis that examines additional expenditure and utilization measures and regional variation is under way. Medicaid and Medicare members will be included when the data become available.



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5.2 CHAMPPS 2011 Report to the Vermont Legislature

December 22, 2011

The CHAMPPS Program

Since its inception in 2006, the Vermont Department of Health's (VDH) CHAMPPS (Coordinated Healthy Activity Motivation and Prevention Programs Program) has served as a foundation for community health and wellness initiatives throughout Vermont. In 2006, Act 215 created the CHAMPPS Program as a means of awarding comprehensive, substantial multi-year grants to communities for health and wellness projects. This commitment to community-wide prevention efforts was intended to complement the Blueprint for Health's work on the transformation of Vermont's health care system. These efforts are intended to be the result of comprehensive, local community assessment and planning efforts to identify local priorities for prevention initiatives. Also called for in Act 203 (2008), community plans are envisioned as a tool to guide community decision-making about local prevention work.

By recognizing the economic impact that chronic illness has on the health care system, the Blueprint has prioritized the prevention and management of chronic illness through clinical interventions, patient education, payment reform, use of health information technology and community health teams. Local prevention strategies funded by CHAMPPS and implemented by local coalitions and public health professionals complete the continuum of efforts to address the human and economic toll of chronic disease. In addition, VDH's Division of Alcohol and Drug Abuse Programs was the recipient of the Strategic Prevention Framework State Incentive Grant (SPF SIG) which funded a statewide learning community focused on employing the public health model on a community level. Numerous community-based substance abuse prevention projects were funded. That grant ended in 2011. Some of these SPF projects have been sustained through an integration of the CHAMPPS program and the federal Substance Abuse Prevention and Treatment Block Grant community grants program. Although the substance abuse prevention funds have been greatly reduced, this integration has allowed some of the strongest community-level work to continue.

A list of projects that were funded with CHAMPPS funds in 2012 appears at the end of this document. The list of CHAMPPS and SPF projects funded in previous years is available in the 2010 Blueprint Annual Report, published in January, 2011, at

http://www.healthvermont.gov/prevent/blueprint/documents/Blueprint_AnnualReport_2009_0110rev.pdf.

Public Health Prevention

Three conceptual frameworks have shaped the thinking and work of public health professionals with respect to their role in creating improved population health and clinical outcomes. These constructs are increasingly shaping the way in which public health staff are working with community partners to plan and implement prevention initiatives such as those supported with CHAMPPS funds. These conceptual frameworks are discussed below.

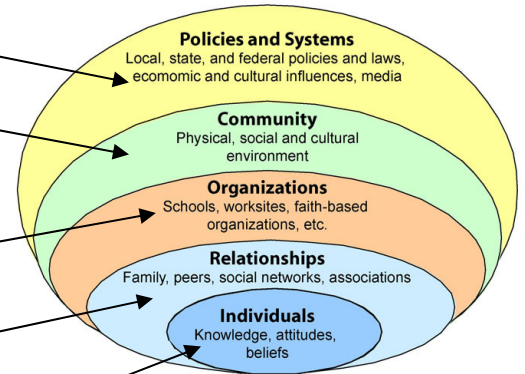
I. The Vermont Prevention Model

During the development of the CHAMPPS program, VDH and stakeholder communities adopted a model to describe various levels of focus for public health interventions. The *Vermont Prevention Model* offers a framework for understanding the importance of public health prevention efforts focused at many levels ranging from the individual level to the level of policy, systems and environmental change. (Figure 1) Although it is widely recognized that the most effective strategies involve the latter, prevention efforts must target all levels of influence in order to be effective. For example, Vermont's success in reducing the percentage of adults and youth grades 9-12 who smoke cigarettes to below the national level is largely the result of Vermont's deliberate work to address the public health issue of smoking at various levels of influence ranging from the individual level to the policy level. Similarly, efforts to improve Vermont's health outcomes with respect to the increasing public health burden of obesity are addressing nutrition and physical activity at each level of focus as the example in Figure 1 shows. Reducing the rate of obesity is one of the Center for Disease Control and Prevention's (CDC) "Winnable Battles", so named because of the large-scale impact on health and the availability of effective intervention strategies. Currently, all CHAMPPS-funded initiatives are prioritizing nutrition and physical activity for their community prevention work.

Figure 1 Prevention Strategies for Obesity

- The Morristown Select Board added a wellness chapter to their Town Plan.
- Establishment of community garden in a low income housing development in Barre
- Fit and Healthy Swanton's partnership between town, local families and a garden center to develop a community garden
- The After School Program in Sharon, S. Royalton and Tunbridge adopted a Healthy Snack Policy.
- Rutland's buddy programs and walking groups to encourage and combine physical activity and socialization
- Swanton Elementary school sends home newsletters to educate parents on efforts underway promoting fruit and vegetables consumption during snack and meal times.

Vermont Prevention Model



Source: Vermont Department of Health

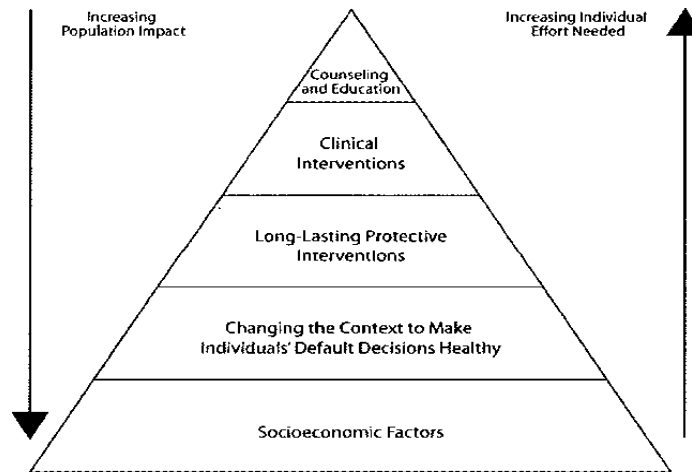
Adopted early in the process of developing the CHAMPPS initiative, the Vermont Prevention Model has and will continue to guide work that seeks to achieve improved health outcomes.

II. The Health Impact Pyramid

Since the inception of the CHAMPPS program, there has been a growing awareness that effective prevention efforts must do more than focus on the education and behavior change of individuals. In addition, it is essential that limited public health prevention resources and efforts be utilized in a manner that offers the most return on investment in terms of impact and outcomes. In early 2010, the Centers for Disease Control and Prevention's (CDC) newly appointed Director, Dr. Thomas Frieden, shared his vision of a 5-tier *Health Impact Pyramid* as a framework for public health action. This model is conceptualized as a pyramid, the base of which consists of interventions or efforts intended to address socioeconomic determinants of health. Proceeding up the narrowing pyramid in ascending order are: interventions that change the environmental context to make individuals' default decisions healthy, clinical interventions that require limited contact but confer long-term protection, ongoing direct clinical care and health education and counseling. Frieden describes the model in the following manner: *"In general, public actions and interventions at the base of the*

pyramid require less individual effort and have the greatest population impact, [but only by] implementing interventions at each of the levels can [we] achieve the maximum possible sustained public health benefit..¹

Figure 2



Frieden's Health Impact Pyramid

Frieden's Health Impact Pyramid is highly compatible with the Vermont Prevention Model and underscores the importance of the field of public health's need to focus its limited resources on efforts that will result in the greatest return on investment. Educating community leaders about this concept has been a significant effort of public health professionals at both the state and local level.

The following presents examples of how these frameworks have shaped local CHAMPPS-funded efforts to implement environmental and system change.

Fit and Healthy Enosburg: A pedestrian safety proposal was submitted by Fit and Healthy Enosburg to the Village Trustees and Town Select Board outlining things local government can do to increase pedestrian usage and safety. As a result of the proposal, the Village moved forward with striping cross walks.

Healthy Retailer-Fit and Healthy Enosburg coalition conducted a store audit with the Jolley Convenience Store in St Albans. This led to the manager inviting Fit

¹ Frieden, TR. A Framework for Public Health Action. *American Journal of Public Health*. 2010; 100(4):590-595.

and Healthy Enosburg partners to participate in a Customer Appreciation Day, where they had the opportunity to meet and describe the Healthy Retailer project to the regional and general managers.

Health Connections of the Upper Valley: The town of Sharon celebrated the opening of a half-mile long trail that improves access to places for physical activity for all community members and will connect the towns of Sharon and South Royalton in the future. The trail was made possible by funding from the Vermont Departments of Health (Fit & Healthy Vermonters), as well as the Vermont Department of Forests, Parks & Recreation (Recreational Trails Program), and the Office of the Attorney General.

III. Integration

The third concept guiding CHAMPPS work is that of integration. Historically, public health prevention programs have been funded from a variety of sources in a categorical manner related to a specific disease (heart disease) or risk factor (smoking). Although the need to prioritize around best practices and prevention strategies for specific outcomes will remain, integration of prevention work will maximize public health capacity and funding. Integration seeks to identify common risk factors among diseases and populations, and coordinate prevention strategies that evidence has shown to be effective in addressing them. Integration efforts will also involve identifying settings such as schools, worksites, etc. for multiple programs to target for enhanced impact. Integration does not result in compromised program identity or integrity; rather it allows for more efficient use of resources to achieve improved outcomes.

Public health prevention work in Vermont has involved the creation and support of multiple community coalitions responsible for the planning, development and implementation of local prevention strategies targeted to risk factors of poor nutrition, inactivity, tobacco use and substance abuse. Fundamental to this work at the local level are the community assessments and plans that have been completed to focus health prevention priorities. Whether through CHAMPPS-funded projects or other community-based efforts aimed at health and wellness, integration of prevention efforts will be emphasized where practical across common risk factors or settings. For example, the CHAMPPS application process has been streamlined to encourage the identification of opportunities to integrate prevention efforts related to nutrition, physical activity, tobacco, substance abuse and access to preventive health care services.

An example of integration working at the local level is the VDH Healthy Retailer project, funded by ARRA grants and the Patient Protection and Accountable Care Act. This initiative will integrate components of the work done by VDH nutrition, tobacco and alcohol prevention programs and communities. Retailers are encouraged to promote healthy foods including fresh, local fruits and vegetables, while limiting advertising of tobacco and alcohol products to youth.

Prevention efforts aimed at a variety of risk factors will join forces to integrate work in retail settings. The expectation is that this integration of prevention efforts will achieve improved coordination at the state and community level.

The community assessment, planning and intervention work that is important to community-level prevention work has required a significant investment in workforce development at VDH. The Department has established positions in the community to address chronic disease prevention and VDH district office staff have organized local and statewide prevention teams consisting of specialists of various program/disease/risk factors to focus on identifying and leading prevention and integration efforts where possible. For example, regional substance abuse prevention consultants have been trained in working with communities on a systematic process for assessing, planning, implementing and evaluating prevention practices and programs, as part of the national SPF SIG system. These consultants have provided this training to their District Office team members. The teams are prepared to offer leadership and consultation to communities and coalitions on the following:

- Assessment of community needs, strengths and stages of change readiness
- Analysis and interpretation of public health surveillance and other data
- Knowledge of evidence-based and best practices for prevention
- Employment of communication, leadership and community organization skills
- Program evaluation

In each district, a member of the local public health office will also serve on the Blueprint's Community Health Team, to both offer insight into available community resources and referral options and gather information about community resource gaps that can inform planning work.

To date, the CHAMPPS initiatives have served not only as a way to stimulate local prevention efforts but also as a foundation for building the skills and experiences necessary for continued work on preventing chronic illness. These efforts and the Blueprint's system transformation efforts should contribute to improved health outcomes and to reducing the individual, social and economic burden of chronic illness.

To further support integration and collaboration, in FY12 VDH began combining community based prevention grants starting with the Alcohol and Drug Prevention and Nutrition and Physical Activity grants. The alcohol and drug prevention grants build on the work of the five-year Strategic Prevention Framework State Incentive Grant (SPF SIG). Twenty-three communities participated in this project. Interventions were focused on three priorities: underage drinking, high risk drinking among people under 25, and marijuana use among people under 25. Every grantee also participated in a statewide learning

community and evaluation of the initiative. This evaluation will be available in 2012.. In FY12 VDH launched the integrated Community-Based Prevention Grants program. The Division of Alcohol and Drug Abuse Programs contributed a portion of the Substance Abuse Prevention and Treatment Block Grant to this integrated grant. Of the sixteen community-based prevention grantees for FY12, twelve of them are former SPF SIG communities. Consistent with CHAMPPS goals, alcohol and drug prevention funds support communitywide, environmental strategies such as local policy initiatives, media advocacy, social marketing campaigns and support of law enforcement efforts. These compliment and strengthen other chronic disease prevention practices underway in the same communities. In addition, all the grantees are implementing VDH's Healthy Retailer initiative.

The descriptions below outline the grantee activities funded by the CHAMPPS state funds. These grantees are implementing policy, environmental and systems change for reducing or preventing chronic conditions.

CHAMPPS Grantees

State Fiscal Year 2012

- **Green Mountain United Way** Green Mountain United Way (GMUW) is focusing on Northfield and Barre – in Northfield, they are assisting with renovations to an unsafe playground and working on making schools open for public use; working with the town to improve traffic safety around the entrance to a local park; establishing community gardens in subsidized housing complexes; and participating in the region's food systems councils to reduce duplication of efforts. \$40,000.
- **Fit and Healthy Enosburg** Fit and Healthy Enosburg is working with the select board to make the town safer for walking and biking; working to increase access to places to be active in the community by posing signs for paths and facilities; helping to establish a vibrant Safe Routes to Schools program; and will implement the Healthy Retailers project to improve access to healthier foods. \$40,000.
- **Health Connections of the Upper Valley** - Royalton, Sharon. Health Connections is strengthening partnerships between the school and community through a "Joint Use Agreement" allowing residents access to the school gym and equipment after school hours. Working with partners to build a trail behind the Sharon Elementary School, and adding amenities such as benches to make it more accessible to people of all abilities, and working to increase pedestrian safety with signs posted along a busy road to slow traffic. Health Connections is establishing a healthy snack policy for the afterschool program; distributing information to families about farmers' market coupons and Farm Share opportunities; helping make EBT machines available at the South Royalton Farmer's Market; and establish a gleaning program to distribute produce to food shelves and day care centers. \$40,000.

Vermont Department of Health
CHAMPPS Appendix to Blueprint for
Health 2011 Annual Report

- **Northeast Kingdom Community Action (NEKCA)** - Newport. NEKCA is working with the town to establish community gardens; working closely with the Vermont Food Bank and Green Mountain Farm to School program to distribute gleaned and donated food to food shelves, schools and senior meal sites; promoting a Grow a Row campaign; and working with the after school program to create a new community trail. \$40,000
- **Essex CHIPS** - Essex Town, Westford. Essex CHIPS is focusing on “active transportation” – working with the town to increase walking through updating and distributing walking maps and painting sidewalks to indicate walking routes; active in supporting local farmers market and making sure it has a Electronic Benefits Machine to accept 3SquaresVT; working with school board to improve school policies related to physical activity and nutrition. \$40,000.
- **Windsor Area Community Partnership (WACP)**- Windsor, Hartland, Weathersfield, W. Windsor. WACP is working with schools to develop “Joint Use Agreements” allowing residents to use school facilities for physical activity when school is not in session; working with schools to develop and implement district wide school wellness policies focused on improving the nutrition environment; working with the towns to explore creating a recreation path for the community; and will provide training and technical assistance for planning commissions and zoning boards using the Vermont Healthy Design Resource once available. \$40,000
- **Ottawaquechee Community Partnership (OCP)** - Woodstock, Reading, Bridgewater. Implementing Farm to School activities in Reading and Bridgewater schools; working with schools to assess their environment to develop and implement school wellness policies; increasing participation by families in an annual, community wide healthy eating and physical activity challenge; implementing Safe Routes to Schools in Woodstock. OCP is also planning to implement the VDH Healthy Retailers project. \$40,000
- **Fit and Healthy Lamoille Valley** – Morristown. Partners are engaging key decision makers to implement changes based on recommendations from a walkability study conducted in 2010; they included a Wellness Article in the Morristown Town Plan; and are working on marketing and offering community wide events for families with young children to promote healthy lifestyles messages. Also working to improve nutrition and activity environments in child care centers, schools, and after school programs. \$40,000
- **Fit and Healthy Swanton** - Swanton. Fit and Healthy Swanton is working with the town to improve signage along paths, indicating where recreation fields or facilities are along the way, and they are working with the Town to enhance zoning language to ensure pedestrian access in new development. Fit and Healthy Swanton is working with the community to improve the two newly established community gardens. This coalition is also continuing to work with the school and afterschool program to implement wellness policies addressing both physical activity and healthy eating. \$40,000.